Exploring how Employees Adapt to an Innovative Contemporary Workplace: How do Office-free Workspaces Influence Communication and Work Practices?

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Abstract

Large firms are increasingly swapping individual offices for open-plan workspace designs with few partitions or dedicated personal desks. Managers and designers claim that these new work environments foster collaboration, improve communication, and encourage an activity-based use of space, while reducing facility costs.

The shift to open-plan workspaces has spawned an extensive multidisciplinary literature addressing how these work environments influence employee's satisfaction, privacy and communication, yet there remains a lack of consensus as to whether open-plan work environments facilitate, hinder, or have little effect on work-related communication.

This exploratory interpretive study sought to address this lack of consensus by revealing the common and divergent themes in employees' sensemaking accounts of their interaction in an office-free work environment. It examined how workers accustomed to conventional office buildings experienced and made sense of activity-based workspaces in a purpose-built office-free building. In doing so, its objective was to produce a framework that provided a coherent understanding of how workers adapt to a radical change in the design of their physical work space and how this affects social dynamics, especially communication.

Data on the interactional dynamics in the new workspace were collected using deliberate non-participant observations. This evidence then shaped the questions that guided semi-structured interviews designed to gather workers' sensemaking accounts of their experiences in the new office-free workplace. The inductive analysis involved two levels of coding designed to establish the central themes shaping workers' accounts of their adaptation experiences and then, how these themes fitted together to represent workers' experience of adjusting to a new office-free work environment. The first-level themes were: physical context, presence at work, social context and self-representations, position representations, and etiquette expectations. These theme categories were then coded into secondary themes in an iterative process that included the extant literature, to produce two overarching themes that captured the essence of employees' communication experience and provided the heart of the emergent conceptual model. These were named sociomaterial effects (Orlikowski, 2007) and socially situated sensemaking (Lave & Wenger, 1991; Weick, 1995) to reflect the concepts that were present in the data.

The main contribution of this study is an empirically-based conceptual model capturing the central considerations that employees address when making sense of their experience of communicating in their contemporary office-free workplace. The central considerations are an interdependent array of social, material, and personal (i.e., self) themes. By capturing this complexity, the model provides a framework for understanding the impact on communication of sociomaterial changes at work, from the workers' perspective. In doing so, it has considerable relevance for all managers, particularly those responsible for people and culture management when transitioning to a new spatial layout without offices, as well as change consultants and architects.

Keywords: Adaptation, office-free workspaces, activity-based working, sociomateriality, communication constitutes the organisation (CCO), sensemaking, presence.

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Abbreviations

CCO	Communication Constitutes the Organisation
ABW	Activity Based Working Model
ANT	Actor Network Theory
KPI	Key Performance Indicator

Chapter 1: Introduction to Research

1.1 Thesis overview

In various ways all organisations are being confronted by the need to adjust to the rapidly changing environments they now find themselves in, as a consequence of technological advancements, globalisation, and the increased competition this encourages (Waber, Magnolfi & Lindsay, 2014). There is pressure to change the way work is done in order to be more efficient and use resources more effectively (Brunia, de Been & van der Voordt, 2016). These changes and pressures have fostered variations in the way work is organised and the types of physical environments in which it takes place (Engelen et al., 2019). New corporate buildings are being transformed to meet the need for efficient space use and to embrace the affordances of digital tools that allow work to be done remotely (Engelen et al., 2019). Employees must adjust to new physical environments by modifying their work practices to suit their environment. This thesis examines the interactional experiences of two groups of employees: those who were required to relocate from an array of buildings with traditional office-based workspaces to a new purpose-built office-free building, and new employees who have begun work in the purpose-built facility.

Previous literature on workers' experiences of their physical working environment has tended to focus on factors such as commitment, privacy and satisfaction, (e.g., Brennan, Chugh & Kline, 2002; McElroy & Morrow, 2010). In the past decade, there has been a significant shift within the literature about the physical workspace to include its effects on social interaction which has contributed to the rise of the concept known as sociomateriality (e.g., De Vaujany et al., 2015; Orlikowski, 2007; Pickering, 1995). The sociomaterial perspective, which is being called "the new black" (Jazabkowski & Pinch, 2013), views people, spatial arrangements, physical objects and technology as intertwined through language and interaction. Verbal and non-verbal communication are channels utilised to explore the relationship between each of the elements.

Research has proposed two opposing predictions about the relationship between work environment and communication behaviours. Firstly, it has proposed that employees who work in an open-plan environment can be encouraged to communicate, due to closer proximity and removal of the physical barriers (Boutellier, Ullman, Schreiber & Naef, 2008;

McCoy & Evans, 2002). The second prediction is that the lack of privacy in open-plan work environments hinders communication, as employees are cautious about being overheard or distracting to others (Morrison & Macky, 2017; Sundstrom, Herbert & Brown, 1982).

Manipulating the relationship between the physical work environment and change has been proposed by managerial scholars as a way to mediate strategic change (Higgins, McAllaster, Certo & Gilbert, 2006), and encourage collaboration (Allen & Henn, 2007). In so doing, they promote the notion that spatial designs can shape employee interactions (Fayard & Weeks, 2007).

This thesis aims to expand our understanding of how changing to a contemporary open-plan working environment affects work practices, and in particular, communication. Specifically, it seeks to answer the overarching question of how work environments influence and shape workplace communication and practices.

This research demonstrates that the spatial design of a contemporary work environment can both promote and discourage communication, as well as have no impact, depending on the circumstances. The findings show that opportunities for communication can be generated in common areas such as kitchens and hallways, though the opportunities are influenced by the physical, social and what I am terming 'presence contexts', as well as position representation, socially indexed self-representation and etiquette expectations.

1.2 Description of Research Process

An exploratory qualitative case study was undertaken, guided by an interpretive ontology. Such an approach was taken because the study sought to understand workers' subjective experiences when adapting to a distinctive office-free workplace, rather than find some sort of objective, generalisable truth. The fragmented and contested nature of the extant literature made the creation of a pre-emptive conceptual framework to direct the data collection unrealistic. Instead, the questions below were developed to guide the data collection and allow participants to provide rich and finely nuanced accounts of interactional dynamics, especially communication, within a contemporary work environment. The questions were:

1. How does the workspace layout shape workplace practices (specifically communication) and work experiences, the way workers interact with others, and the way they organise their work?

2. What adaptations have been necessary for workers as they moved from working in a traditional office arrangement to this new contemporary office-free workplace arrangement?
3. What have been the benefits associated with the innovative workspace?
4. What is needed to maximise the benefits of these workspaces?
5. What changes do colleagues need to make to optimise workers key work practices?
6. What do organisational managers, leaders, change consultants, building designers (such as architects), need to consider when making changes to the physical work environment?

In-depth semi-structured interviews were conducted with 14 individuals who work in a contemporary office-free environment. The participants varied in terms of tenure, position, level of hierarchy and stage of career. The sample was designed to ensure a diverse range of experiences, attitudes, perspectives and thus responses. Interviews were transcribed to allow a thematic analysis to be conducted. This was followed by a secondary phase of coding to categorise the common themes, identify the relationships between them and establish which concepts were at the heart of workers' experiences. The result is an empirically-based conceptual framework that captures the essence of workers' sense of the dynamics and communication associated with office-free work.

1.3 Research Justification

Many organisations are rethinking how they organise their workspaces. As a result, contemporary work environments such as activity-based working (ABW) are increasingly admired and accepted both nationally and internationally (Chafi, Harder & Danielsson, 2020). For example, Google has been redefining the traditional workspace for decades with their combination of extremely imaginative and animated office designs worldwide. In New Zealand, Vodafone redesigned their offices in both Christchurch and Auckland to smart, mobile, flexible, open-plan and collaborative spaces, to encourage creativity and increased productivity (Vodafone, 2020). Following this trend, in 2018 the Department of Internal Affairs redesigned its Wellington offices to produce a creative work environment with diverse workspaces to accommodate its staff of 1,000.

Despite the many contemporary workplace designs, it is difficult to identify specific examples which have been found not to improve work practices. This is because studies of specific organisations' unsuccessful designs are rare, and the resulting reports have not

always been made publicly available. However, many scholars (e.g., Balrdy & Barnes; 2012; Brennan, Chugh & Kline, 2002; Kim & de Dear, 2013; Maher & von Hippel, 2005; Oldham & Brass, 1979; Sundstrom et al., 1982) advocate that open-plan work environments reduce face-to-face interaction, privacy, and productivity, and increase job dissatisfaction and noise level.

This Master's study uses an exemplary case to explore in depth how workers familiar with traditional office buildings experience working in a new contemporary workplace without offices. Not only does it provide valuable insights into how workers make sense of their experiences, it presents an empirically-based conceptual framework that captures the central themes in their accounts of their experiences. In doing so, it contributes an original model that will be of value to all those associated with designing and managing office-free workplaces.

1.4 Background Description

The unique, award-winning, contemporary workplace selected for this case study offered an ideal opportunity to explore how workers accustomed to a conventional office building experience working in an office-free, activity-based workplace in the New Zealand context.

The firm's transition efforts began 18 months prior to the physical relocation of staff. The process began with designing the new space in a way that engaged employees. At the same time, the organisation promoted the value of becoming a paper-intelligent work environment. The new workspace was designed to embrace the concept of activity-based working (ABW) which, as outlined on the company's website, should promote flexibility, collaboration, sharing and learning from others.

The employers recognised that they were asking workers to adapt to very different physical environments, so a project team of employees and external consultants was established to champion the new flexible working facility as a desirable work environment for the firm and its employees. The move to the new premises was in line with each team member's values and views on innovation, delivery, and empowerment. This was considered important as members of the project team acted as conduits between their own teams and the project plans.

The central idea behind the transition was to create a flexible space, one that could cope with changing and increasing demands as well as provide optimum technology solutions to support employees' daily work and customers' needs. The intention was that employees

would transform their working practices. From a technology perspective, each employee was issued with a laptop and cell phone, to support nomadic work where applicable. The plan was that, without a fixed desk, dedicated phones or computers, employees would became nomadic in their daily activities, with freedom to choose their place of work (home, office, or an external work site) and when they worked each day (i.e., start early morning or late, with flexibility). No individual desks or workstations were assigned, except for specific support desks and call centre employees who required call-recording equipment. The result was a building in which employees were encouraged to 'float' physically through the workspace, utilising the upgraded portable technology capabilities to connect them with internal and external colleagues.

The physical environment includes features such as alcoves in the corners of the building and small huts in various locations, which are designed for quiet, personal and reflective work. Work benches are designed for small, collaborative projects and tasks and give employees the option to stand-up while working. The design also includes spaces labelled 'the town-square' for company gatherings such as knowledge hubs and celebrations.

Figure 1: External photograph of the work environment

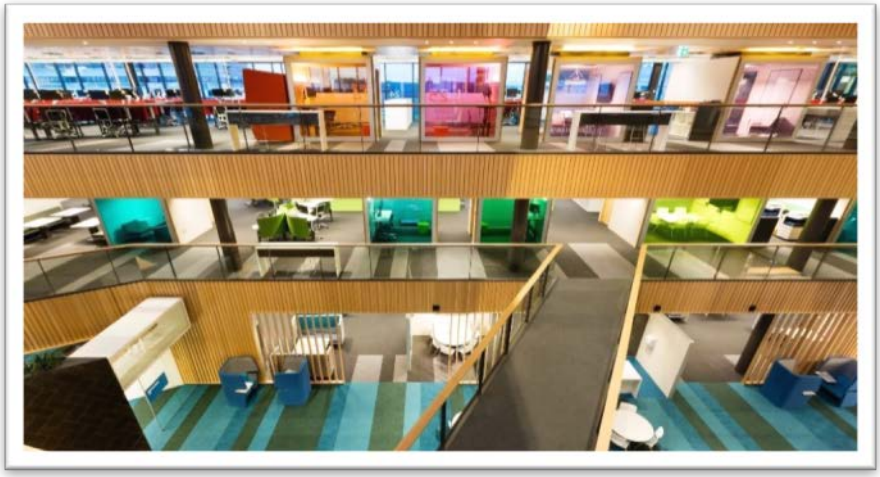
On each of the three floors of the building, there are informal and formal places to meet colleagues, silent spaces designed for individual tasks, collaborative areas for conversing, and individual desks in an open-plan layout with computer monitors.

"The building freed us up to think that it's not about when or how you do the work, it's just if you are doing the work." – ***PJ***

The comment from one participant (above) suggests that what the space inspires is pitted against the mind-set of an assigned desk or area in which to work. The new building encourages the fluidity of completing work in several different physical spaces whereas a

traditional office provides a dedicated personal space and sense of being located. The fluidity extends beyond the physical building to remote locations such as home or other work sites.

Figure 2: Internal photograph of the three-storied work environment



1.5 Thesis structure

This thesis is structured into six chapters, as outlined below:

This chapter (Chapter One) briefly describes the organisational communication and space studies that provided the rationale for this research topic. It then details the case study, the research questions, and the thesis structure.

Chapter Two provides an analysis of existing literature on research and debates relevant to the research questions and findings. It addresses the key topics of organisational communication, especially the communication constitutes the organisation (CCO) perspective, contemporary workspaces, as well as situated cognition theory (Lave and Wenger, 1991) and sociomateriality (Orlikowski, 2007), which informed the naming of the two key themes. This review reveals a clear gap in the literature regarding how workers experience workplace dynamics, especially communication, in contemporary workplaces. Office-free designs have replaced traditional office spaces with open-plan, activity-based workspaces. The literature review highlights how little is known about workers' experiences in such office-free workspaces in the southern hemisphere.

Chapter Three provides a comprehensive explanation of the methodology used in this research. This chapter outlines the ontological, epistemological, and theoretical assumptions that underpin the research design, followed by an explanation of the data collection and

analysis methods, and observations regarding data quality and how ethical considerations were approached.

Chapter Four presents and discusses the findings from the semi-structured interviews in relation to the research questions, focusing specifically on the themes that emerged from the data analysis. This chapter concludes by exploring the relationships that were revealed between the themes.

Chapter Five discusses the key learnings about how participants understand their communication experiences in a contemporary office-free work environment, in relation to relevant literature. This chapter presents the six key primary themes and secondary coding themes which are borrowed from extant literature and compared to similar research. Next, this chapter identifies the research implications which describe how this research addressed the gaps in the literature.

Finally, Chapter Six concludes the thesis by summarising the contribution of this research to theory and practice, and considering the limitations and opportunities it presents for future research.

Chapter 2: Literature review

2.1 Introduction

This chapter reviews the contemporary literature that addresses the relationship of communication, the organisation and its physical spaces. Firstly, it reviews the literature on a perspective that has emerged over the last 25 years and has redefined how we theorise the relationship between communication and the organisation. This is called communication constitutes the organisation (CCO) perspective (See Ashcraft, Kuhn & Cooren, 2009; Blaschke, Schoeneborn & Seidl, 2012). The literature from this perspective describes communication as fundamental and formative to everything in the organisation (Cooren, 2004 & Cooren et al., 2011; Luhmann, 1995; McPhee & Zaug, 2000). Following this, the chapter provides a summary of the contemporary literature on the design of the physical work environment and open-plan designs that support an activity-based working model. The chapter then reviews the extant literature on the notion of sociomateriality, which refers to the inextricable link between the material and the social worlds, often discussed as a network of associations that should be considered in order to understand organising (see Leonardi, 2013; Orlikowski, 2007). Next, the chapter addresses situated cognition (see Lave & Wenger, 1991; Semin and Smith, 1986, 2007 and 2013; Semin, Garrido and Palma 2012; Sun, Semin and Smith, 2002), which proposes that cognition is not restricted to the individual person, but encompasses the physical environment, the social environment and human behaviour. These two concepts inspired the naming of the two key themes found by this study. The chapter then concludes by reviewing the literature on the social phenomenon of sensemaking (Weick, 1995), as this is at the heart of the approach in this Masters study which sought to understand how workers made sense of their new office-less workplace.

2.2 Organisational Communication

Organisational communication is defined by Hackman and Johnson (2013) as the “transfer of symbols which allows individuals to create meaning” (p.5). Moreover, communication is considered essential to an organisation’s ability to meet goals and succeed (Marques, 2010). It is also inextricably linked to sensemaking (addressed later), the process by which

organisational members individually and collectively make sense of their experiences in the workplace (Mills, 2002).

Although scholars study a diverse array of topics relating to organisational communication (Salem & Timmerman, 2016), it is generally agreed that communication is fundamental to understanding and generating knowledge, and plays a vital role in the foundation of organisations and their outputs (Beytekin & Arslan, 2013; Uslu, 2017). Scholars (e.g., Bisel, 2010; Keyton et al., 2013; Uslu, 2017) concur that effective communication is essential to a supportive, participative and interdisciplinary work environment, and of fundamental importance to an organisation.

The way the relationship between an organisation and communication has shifted from being viewed as instrument portraying communication to being responsible for socially constructing the organisation (Schoeneborn, 2011). Additionally, Avram (2015), goes as far as to say that in the absence of communication, no human activity is possible. Similarly, Sypher and Zorn (1986) state that without communication, there is no organisation. This perspective of communication as intrinsic to the organisation is in line with the communication constitutes the organisation (CCO) perspective (e.g., Ashcraft, Kuhn & Cooren, 2009; Blaschke, Schoeneborn & Seidl, 2012) which is discussed in detail below.

2.2.1 Communication Constitutes the Organisation

Historically, scholars treated organisations as a socially constructed phenomenon, created through continual interaction (Weick, 1979). From this perspective, communication was viewed as one of several activities that occurred inside the established ‘walls’ of an organisation (Schoeneborn et al., 2018). However in recent years, researchers have begun to promote the perspective that organisations are established through communication, a perspective referred to as communication constitutes the organisation (CCO) (Ashcraft, Kuhn & Cooren, 2009; Blaschke, Schoeneborn & Seidl, 2012). The notion of CCO takes a broad position toward organising by advocating that language, discourse, talk, and in fact all aspects communication, not only reflect but also constitute organising (Cooren et al., 2011), to the extent that Putnam and Nicotera (2008) suggest that communication creates and maintains the organisation as it develops over time.

A CCO perspective has prompted a reconsideration in the field of organisational communication. For example, instead of studying communication as an organisational

activity, CCO scholars propose that research should be conducted to determine how organisations are developed through communication (Schoeneborn, Kuhn & Kärreman 2018). Research in this vein encourages scholars to study the whole organisation as it emerges communicatively, treating communication as a process and the organisation as an entity that emerges through and in communication (Schoeneborn, Kuhn & Kärreman 2018).

According to Cooren and Martine (2016), James R. Taylor should be considered the first scholar to provide a theoretical foundation for the theory which supports a CCO perspective. Taylor published a book written in French in 1988 that described how an organisation develops and is maintained through communication. However, the term CCO was first coined by Robert McPhee in an article published in 2000, which outlined a continual message flow approach to explain how communication constitutes the organisation.

Organisational studies are considered the key outlet for research on CCO. Within the field of CCO research there are several different scholarly perspectives. Schoeneborn et al. (2014) observe that there are three main schools of thought among those scholars proposing a CCO perspective. Firstly, the North American scholar perspective at the Montreal School of Organisational Communication, which originated from James Taylor and has continued to be developed by his co-workers at the University of Montreal. Secondly, the Four-Flows Model initiated by Robert McPhee and Pamela Zaug (2000), and thirdly, Luhmann's Theory of Social Systems, which has been developed by German and European scholars such as Blaschke, Schoeneborn & Seidl (2012). These three CCO perspectives will be discussed separately below.

James R. Taylor (Taylor et al., 1996; Taylor &Van Every, 2000; Cooren, 2004; Cooren, Taylor & Van Emery, 2006) are the primary architects from the Montreal School of thought. This perspective is further supported and researched by Francois Cooren (Cooren, 2004; Cooren 2006; Cooren et al., 2011). The Montreal School's perspective on CCO proposes that the logic associated with CCO is reflective and recursive. Its proponents advocate that the organisation is constituted through the human interaction of its members (Cooren, 2007). However, in turn, it constitutes the members, by "authorising them to represent it in their (and thus also in its) communicative practices" (Cooren, Vaara, Langley & Tsoukas, 2014, p.17). Furthermore, the Montreal school views the organisation as in a constant state of "becoming", through the roles of the dynamic relationship between conversation and text as constituting the organisation (Bolvin, Brumman & Barker, 2017). Conversation is described

as the interaction between human entities, and the text is the subject or content upon which the conversations are based (Schoeneborn, Kuhn & Kärreman 2018).

In addition to discourse, The Montreal School perspective also recognises materiality as contributing to the endurance of organisations, through documents and other texts, as well as technology and other artefacts (Ashcraft et al., 2009; Bencherki, 2016; Brummans, 2007; Cooren, 2004). Further to this, Cnossen and Bencherki (2018) propose assemblages of space, such as offices, meeting rooms, corridors and coffee stations help constitute an organisation.

The Four-Flows model developed by McPhee and Zaug (2000) identifies four distinct communicative flows: organisational self-structuring, membership negotiation, activity coordination, and institutional positioning. These communicative flows can influence one another through their interactions, therefore both producing and reproducing the social system. This theory highlights the internal and external relationships between organisational members and the organisation and external entities.

The four-flows model is based on Giddens's Structuration theory (1984), a social theory which explains the production and reproduction of social practices. To do this, Giddens analyses the agents and structures of the social system. Agents are individuals or groups (i.e., people) and structures are the properties (e.g., memory and manifestations of social action) which allow for the binding of space and time in social practices. Agents such as individuals draw upon the structure of their memories during social actions, however memories are also generated by social action and are thus an outcome of social practices. This relationship is referred to as the duality of structure, a central idea of Giddens's structuration theory, which advocates that agents and structures are inseparable and neither holds superiority.

Overall, the four-flows model proposes that the organisation is constituted through continual message flows, thus it can be considered as a broader view of communication in comparison to the other two schools of thought or perspectives.

The third CCO perspective is the Luhmann Theory of Social Systems, which has recently been included as a strand of CCO theorising (Cooren et al., 2011). The fundamental element of Luhmann's theory is communication and social structures are perceived as systems of communication. This perspective advocates that meaning is developed through social systems and therefore, individuals do not create meaning. Schoeneborn (2014) explains that from this perspective, communication is a form of observation and the amalgamation of three

variables: information, utterance and understanding (Schoeneborn, 2014). As Schoeneborn et al. (2014) state, Luhmann's perspective attributes a lesser value to human agency in communication and therefore favours social systems' agency.

Interestingly, a critique of the central concept that unites the CCO perspectives, written by Bisel (2010), outlines that although it is a comprehensible and valid concept, clarification or an addendum is required in terms of the processes by which communication comes to constitute organising. Bisel's critique does not discount the essence of the CCO perspectives, but rather, suggests potential improvements, which are summed up when he states that "communication is needed for organising, but is not enough to ensure an organisation will be constituted, because at times, communication itself may undermine organising" (Bisel, 2010 p.128). Further to this, Cnossen and Bencherki (2018) suggest that a drawback of a CCO perspective is that it does not consider how spaces, such as offices, meeting areas and so forth, influence organising.

Arnaud, Mills and Legrand, (2016) embrace the Montreal CCO perspective in their research of organisational change. They suggest that discourse, along with materials used during organisational change, can constitute the process. They also recognise the complexities of organisational change communication, demonstrating the conflicting discourses that can exist at various levels of an organisation. Extending this, Arnaud, Mills, Legrand and Maton (2016) studied a strategic change process by examining the discourse adopted by middle managers. However, they looked beyond discourse to consider materials in the form of artefacts (i.e., daily memos, work schedules and work manuals) and bodies (i.e., body language and gestures). They found that strategy can be materialised in tangible mundane items as well as discourse and revealed how materiality and discourse are combined in practice (Jarzabkowski, Burke and Spee, 2015). Furthermore, scholars Cnossen and Bencherki (2018) advocate for an extension on singular artefacts and discourse as constitutive to the organisation. They propose that a CCO perspective should be inclusive of an individual's interactions with assemblages of materiality and space. In line with this, recent literature (e.g., Schoeneborn, Kuhn and Karreman, 2019) suggests that researchers who embrace a CCO perspective are primarily interested in revealing the ongoing nature of organising through continuous communicative engagements.

In summary, the literature review revealed that the CCO perspective is not a single theory, but a collection of perspectives that includes three significant and distinct schools of thought,

each of which approach the relationship between the organisation and communication slightly differently (Shoeneborn, Blaschke & Cooren, 2014). However, these perspectives are unified by the notion that organisations are established and maintained through communication. Proponents of the three main approaches agree that if communication is constitutive of the organisation, then it cannot be considered as one of the many factors involved in organising (Cooren, Taylor and Van Every, 2013). In other words, discourse, talk, and communication are not only reflective of organisational phenomena and action, but also constitute it (Cooren et al., 2011).

This Masters research was inspired by this central tenet of the CCO perspective – that communication constitutes the organisation. It prompted the researcher to speculate about what happens when an organisation disrupts the existing communication environment by changing the physical environment in which communication occurs. How does this affect the people who are communicating? What does it do to their experiences at work? How does work change when communication is disrupted by a change in the physical environment? How is the organisation being (re)constituted? Thus, the CCO perspective ignited the curiosity that gave rise to these initial research questions above. These questions focus on how the workers experience the new office-free workspaces and how this influences behaviour specifically communication.

2.2.2 Conclusion

Section two reviewed the contemporary literature in the organisational communication field that addresses the fundamental nature of communication in an organisation. The section began by addressing the concept of organisational communication and exploring how it has been studied. The central literature on the CCO perspective was then reviewed. This perspective proposes that communication is not merely a tool for organising, or the outcome of organising, but actually constitutes the organisation. The chapter then examined the similarities and differences between the three main CCO perspectives, and how these prompted the preliminary research questions. The next literature section reviews space and the physicality of the work environment to reveal how scholars link communication to the workspaces where communication occurs.

2.3 Space and the Physical Work Environment

Elsbach and Pratt (2007) define the physical work environment as "material objects and stimuli as well as the arrangements of those objects and stimuli" (pp. 181-182). Research on the materiality of the physical work environment and how this influences workplace processes is not new, but has seen a resurgence of interest as digitisation has disrupted both the way people work and their relationship to the physical workspace.

Arguably one of the first, and certainly the most well-known, bodies of research on the physical work environment (Fayard & Weeks, 2017), was the Hawthorne experiments conducted in 1927 at the Western Electric Company in Chicago (Roethlisberger, Dickson & Wright, 1939).These experiments demonstrated that the physical work environment affected employee behaviours, often in an unexpected way (Gillespie 1991). They found that employee satisfaction and efficiency outcomes were closely related to the physical work environment and needs of the employees. Recent research by Irving (2016) supported this by concluding that employee behaviour and collaboration is influenced by the physical workspace.

The Hawthorne experiments research has subsequently prompted scholars to focus on the social and psychological precursors of organisational behaviour (Sutton & Rafaeli, 1987). Several studies were published in the 1970s and 1980s which highlighted the impact of open-plan offices on employees' privacy (e.g., Oldham & Brass, 1979; Sundstrom et al., 1982), contentment or satisfaction (e.g., Oldham 1988; Sutton & Rafaeli, 1987), and workplace dynamics (Hedge, 1982). These studies concluded that open-plan work environments reduce privacy as there is a greater chance of being overheard. Satisfaction decreases due to worker density and distractions generated by open-plan workspaces.

Research on the physical work environment has traditionally studied the relationship between physical features and behaviours in order to forecast outcomes (e.g., Block & Stokes, 1989; Oldham & Brass, 1979; Sundstrom et al., 1982). The findings from such studies are mixed, prompting Elsbach and Pratt (2007) to argue that there is not one standard physical arrangement that will constantly produce anticipated positive outcomes in well-being, collaboration or communication. Instead, they suggest that there are trade-offs between physical features and desired behaviours. Consistent with this conclusion, research by Kim and de Dear (2013), found that open-plan office arrangements enhance communication, but reduce concentration and privacy.

In the past two decades, interest and research on physical work environments has become widespread (Hernes, 2004; Irving, 2016; Kornberger & Clegg, 2006), focussing on examining spatial settings to analyse organisations and their practices (van Marrewijk and Yanow, 2010). Recently published literature, (e.g. Irving, 2016, Seddigh et al., 2015; Van Marrewijk & Van den Ende, 2018) has explored the relationship between spatial configurations and work practices, producing complex accounts of collaboration and communication. Specifically, Irving (2016) found that collaboration in an open-plan office is developed through the combination of physical, social, and individual factors, and that the open-plan workspace can be a scaffold to explain workplace collaboration.

Scholars are adopting theoretical perspectives from other disciplines to produce rich accounts of the effects that the physical work environment has on workers and organising. The studies on organisational space range from intricate accounts of workspaces, focussing on issues such as professional identity and power (e.g., Baldry & Barnes, 2012; Hirst, 2011; Van Marrewijk & Willems, 2017), to considering workflow and open-plan workspaces in terms of organisational change (e.g., Parkin et al., 2011; Van Marrewijk and Van Den Ende, 2018). Specifically, Van Marrewijk and Van Den Ende (2018) reviewed how a radical physical organisational change can have unintended consequences and influence workplace dynamics. This Master's thesis contribution is placed within this growing literature as it seeks to improve the current understanding of how radical change in the physical work space, involving moving to an office-free design, influences workers' experience and sense of workplace dynamics, specifically communication.

As noted already, a recent study by Cnossen and Bencherki (2018) reviews organisational space in terms of 'assemblages' a phrase derived from the French term 'agencement' (Phillips, 2006) that was originally coined by Deleuze & Guattari (1988). Assemblages can be described as a collection of people or artefacts, with a focus on the inter-relationship between elements (Venn, 2006). Cnossen and Bencherki (2018) examine assemblages in terms of organisational space, materials, and the interaction with practices. They conclude that material assemblages shape organisational practices, and organisational practices give meaning to space. Thus, there is a mutually constitutive relationship between the two. The term assemblage is relevant for this Masters research as material artefacts, people, and the interaction between materiality, people, and their communication experiences in a new office-free workplace, are the focus of the research.

Research examining this interface has occurred in the field of information sciences as the arrival of digital devices has changed materiality in the workplace and created a new interface between people and physical artefacts. This topic will be returned to in the section that reviews the literature on sociomateriality, later in this review.

2.3.1 Presence at work

'Presence' can be defined as a subjective feeling which conveys how connected an individual is to an environment (Atkinson, 2008). It is also defined by Rose (2016), who considers presence in terms of an individual's sense of loyalty, attachment, and belonging to environments.

There are four distinct types of presence outlined by Mantovani and Riva (1999). Firstly, presence can be experienced as environmental, which refers to how the environment recognises and responds to a person. Individuals identify with their environments and as a result can develop a sense of comfort towards it. Secondly, personal presence refers to how present an individual may feel physically in a given environment. Next is social presence - the extent to which an individual feels a sense of belonging through meaningful communication with others. Lastly, cognitive presence is how confident an individual feels about contributing to the thinking of a group.

The notions of environmental, personal, and social presence are highly relevant, as this research explores employees' presence within the workplace setting. The findings chapter explores the themes of presence, co-presence, and absence, which highlight how the physical work environment influences the participant's experience in the work environment.

2.3.2 Open-plan Workspaces

In the last two decades, a material shift has occurred in organisational research towards studying contemporary office designs (Irving, 2016). According to Baldry and Barnes (2012) open-plan offices were introduced to the United States in the 1920s, and reached their height of popularity in the 1970s. Generally, open-plan offices are designed so that organisations can offer flexible workspaces while reconfiguring at minimal cost (Brennan et al, 2002). Open-plan offices and similar designs such as flexible, hot-desking or alternative workspaces, have gained significant attention in organisational studies (Van Marrewijk & Van den Ende, 2018).

It is recognised that “open-plan” can have multiple meanings, ranging from fully nomadic work spaces to set desks with collaborative areas (Bean & Eisenberg, 2006). Parkin et al. (2011) state that “we are careful here to use the term ‘more open’ rather than ‘open-plan’, as there remains a lack of consensus in the literature regarding what design elements constitute open-plan environments” (p.32). However, Danielsson and Bodin, (2008) define open-plan offices as a space shared by a group of at least four people and this often ranges up to 24 people. Therefore, the term open-plan is fluid and context specific, making it is necessary for the researcher to classify which design they are researching.

The extant research on open-plan offices is somewhat fragmented and contradictory, with some research suggesting that open-plan offices can result in reduced collaboration and interaction (e.g., De Croon, Sluiter, Kuijer & Frings-Dresen 2005). Furthermore, a study by Hatch (1987) found that employees who had their own private offices communicated more than those who worked in open-plan environments. These findings imply that having a private space, such as a closed-door office, encourages honesty as it increases the ability to control conversation boundaries. In contrast, research by Boutellier, Ullman, Schreiber and Naef (2008) found that open-plan workspaces facilitate communication. Similarly, other research by Parkin, Austin, Pinder, Baguley and Allenby (2011) supported open-plan environments, their findings suggesting that open-plan spaces increase work satisfaction.

2.3.3 Activity Based Working

Activity Based Working (ABW) is an emerging way to design the work environment (Engelen et al., 2019). The term was originally alluded to by Stone and Luchetti, in 1985 and defined by Chilton and Baldry (1997) as “a unified system which creatively combines the nature of the physical settings on teams of people who understand business objectives, work processes, people and culture management, information technology and information use, communications, change management and space planning” (p.188).

The fundamental design characteristic of ABW is a movement away from what are considered traditional allocated seating arrangements, to open workspaces (Arundell et al., 2018). The overarching aim of ABW is to create an organisation where work is not bound by space, but is viewed as a mind-set (Bean & Hamilton, 2006) that facilitates organisational flexibility (Raymond & Cunliffe, 1997).

Research has suggested that the advantages of ABW designs allow employees to choose workstations tailored to their tasks (Skogland, 2017), the freedom to individualise workstyle and location (Engelen, 2019), increased collaboration with dedicated spaces for brainstorming and meetings, while reducing the necessary floor space and operational costs (Arundell et al., 2018). In contrast, some research has outlined the main disadvantage of an ABW design is lack of privacy (Brunia, de Been & van de Voordt, 2016; Gorgievski et al., 2010). Additionally, van der Voordt (2004) and de Been and Beijer (2014) found that work performance was negatively impacted by an ABW design.

Typically, ABW designs include distinct focused zones for concentrated work, semi-focused zones which allow for a combination of tasks, and unmarked zones which allow employees to utilise the space for any work activity. Other design features include break-out areas, meeting rooms, sit-stand workstations, and kitchen areas (Engelen, 2019). An ABW model provides employees with control over their work environment, thus enabling them to self-manage their working day and modify this as necessary (O'Neill, 2010).

As with the wide-ranging research on open-plan workplaces, research in the area of ABW has produced mixed findings. For example, Ekstrand and Damman (2016) found that ABW increased environmental control, employee satisfaction, and communication. Additionally, Arundell et al. (2018) found that ABW supports improved physical activity in the workplace. However, other studies have not only found that ABW results in a lack of privacy and personal space (e.g., Morrison & Macky, 2017) but individuals disregard the desk-sharing and space rules (e.g., Babapour, Karlsson & Osvalder, 2018) and can have difficulty finding colleagues (e.g,. Rolfö, Eklund & Jahncke, 2017). Although ABW models have been common in some European countries for several decades, in other parts of the world these models have only recently begun to gain popularity (Engelen, 2019). Therefore, studies to date on ABW models have been limited, resulting in difficulty with generalising findings.

In terms of research on the association between communication and ABW environments, there is an emerging body of findings suggesting that a positive increase in communication occurs as a result of the introduction of activity-based working models. For example, Blok et al. (2012) found that the flexible work environment supported and encouraged communication. Furthermore, the findings of de Been, Beijer and den Hollander (2015) suggest that communication and knowledge sharing is improved by an ABW model, with individuals interacting with a diverse range of colleagues in the open spaces.

Overall, ABW has become increasingly common in a range of organisations over the past ten years (Engelen, 2019), as it encourages multidisciplinary collaboration and an agile way of working. ABW models align with the view that there is a relational involvement between space and work practices, as opposed to the view that these factors as unrelated. Research on ABW is producing an abundance of literature that is revealing how space can both enable and restrict work practices.

2.3.4 Conclusion

The literature in this section explored the concepts of space and the physical work environment, reviewing how these topics have been studied by scholars over the past decades. It highlights how space influences work practices, and the material shift that has occurred in the workspace design of organisations and in space-related research. Established themes such as privacy, satisfaction, and noise level are apparent within research on the physical work environment. The following section introduces and explores the literature on sociomateriality, a concept that was chosen from the extant literature because it captures the essence of one of the clusters of key themes that emerged from the second level of coding. As its construction suggests, it couples the social dynamics of the workplace to the physicality of the workplace.

2.4 Sociomateriality

Sociomateriality is the study of time and space. The theory is developed with a focus on the intersection between humans, spatial arrangements, physical objects and technology, and how these are intertwined through language and interaction (Pickering, 1995; de Vaujany et al., 2015). Sociomateriality has come to distinction and been defined by Orlikowski (2007), who describes it as relationship between the social and material, stating that it is “the constitutive entanglement of the social and the material in everyday organisational life” (p. 1438).

Goldszmidt (2017) states that sociomateriality is a term which encourages the decentring of humans in research, in order to understand the complex relationship between the material and the social worlds. Further to this, Orlikowski (2007), suggests that to understand materiality as being integral to organising, researchers should assume: “there is no social that is not also material, and no material that is not social” (p. 1437). Cooren, Taylor, and Van Every (2013) also propose that researchers need to take account of both the material and social which

constitute the organisation, considering that the actions of humans are imbricated with those of the material.

Jarzabkowski and Pinch (2013) argue that there are three main views of sociomateriality, with the emergent third view being the one that they advocate.

Firstly, there is an affordances approach which explores how humans interact with particular characteristics of materials. It recognises how objects can be repurposed through human interactions (David & Pinch, 2006). However, as mentioned by Jarzabkowski and Pinch (2013), this view fails to consider the social nature and the meaning of the interaction between humans and materials.

Secondly, there is a script approach which is developed from the literature on Actor Network Theory (ANT), originally established by Michel Callon (1986) and Bruno Latour (1987). ANT theory proposes that both human and non-human entities are formed through their interactions with one another. It does not however privilege the agency of an entity - all are treated as equivalent contributors in a continuous network of human and non-human interactions (Law, 1992). This perspective is embedded in sociomateriality by recognising that there are no fundamental variances between the social and the material (Latour, 2005).

A third view of sociomateriality is an accomplishing approach (Jazabkowski & Pinch, 2013), which recognises the interaction between the social and the material in a multitude of contexts (Bloomfield et al., 2010). This perspective goes beyond determining the affordances of objects. Rather, it encourages researchers to explore the possible entanglements of social and material worlds beyond what might initially be assumed.

An important aspect of sociomateriality is the enactment between the material and social worlds. Barad (2003) draws attention to this by identifying that the notion of constitutive entanglement does not presume fixed entities, proposing instead that they are created through on-going interaction. Orlikowski (2010) explains this association between the material and the social through the lens of a relational ontology, which supports this perspective in recognising that sociomaterial realities are fluid, interconnected and temporary emergent practices that form organisations. Further to this, Cnossen & Bencherki, (2018) compare the “intrinsic interconnectedness between organising and space” (p.2), this is to say that there is a relation between the two, and thus organising is not possible without space.

There appears to be two alternative perspectives on materiality in current organisational research and literature, which are outlined by Leonardi, (2013). One is to overlook, or not consider, the impact that materiality has on organising. The second is to study cases of technology implementation in an organisation. Orlikowski (2010) describes this perspective as presuming that technology and humans are fundamentally different and therefore separate.

Recent literature in the field of sociomateriality recommends that materiality and sociality should be considered fundamental entities of everything that exists (Cooren, 2018), therefore, all practices are indeed sociomaterial in nature (Katila et al., 2019).

In line with a communication constitutes the organisation (CCO) perspective (Ashcraft, Kuhn & Cooren, 2009; Blaschke, Schoeneborn & Seidl, 2012; McPhee & Zaug, 2000), Cooren (2018) argues that sociomateriality puts communication at the forefront in terms of its constitutive agency. He reviews communication in the broadest sense of the word, including the verbal and non-verbal communication between people, but also between materials such as physical objects and technology.

The literature reviewed in this section explains that a sociomaterial perspective assumes that the environment is intimately involved in what we do at work. Consequently, it provides the theoretical foundations of this research to distinguish the uncertainties and multiplicities that are embedded in the connection between the physical environment and work practices. The next section reviews the related notion of situated cognition, which considers how an individual's thoughts and cognition interrelate to materiality and social contexts.

2.5 Situated Cognition Theory

Lave and Wenger (1991) describe situated cognition in relation to learning. They observe that to understand learning, it needs to be situated within a community of practice. Communities of practice, which are located everywhere, are places where people with common passions gather. They take the form of schools, homes and organisations. Therefore, this theory has relevance to a work environment and how people behave within the community of practice of an organisation.

Further to this, Semin and Smith (2013) state that: "Adequate explanation of cognition requires an understanding of the interplay between behavior, bodily structure, and environmental resources…rather than a focus on the isolated study of individual cognitive

functions such as attention, memory, or learning" (p.125). Therefore, underpinning situated cognition theory as the notion that cognition is not restricted to the human person, but encompasses the physical environment, the social environment, and human behaviour. Situated cognition is drawn on to explore the relationship between communication and office-free work environments.

Situated cognition has been developed from several different disciplines, thus the interpretation and delivery among scholars differs. Traditionally, situated cognition was developed and researched by anthropologists in the field of educational psychology, to explain the process of learning (e.g., Lave & Wenger, 1991).This approach incorporates individual knowledge, social contexts, and physical artefacts such as technology, to determine the transfer of individual schema under different situations. The learning process is treated as fixed, with an objective of attaining knowledge. However, while situated cognition has emerged from a number of disciplines, it is social psychology that has produced the version of situated cognition theory heavily researched by Semin and Smith (1986, 2007, and 2013), Sun, Semin and Smith (2002), and Semin, Garrido and Palma (2012). This perspective focuses on cognition as being socially situated within the physical environment. Semin and Smith argue that memory, decision-making and learning should be defined in terms of adaptive responses to physical and social context. This aligns with this Master's study, as the communicative actions within the office-free work environment were explored in relation to personal or (self) representations.

Lant and Shapira (2000) defines situated cognition theory in organisations as "the interaction of cognitive schemas and organisational context". Schemas are mental thoughts and opinions that are generated through lived experiences. They act as frameworks and allow for humans to interpret situations (Walsh, 1995). Contexts are the physical and social settings in which cognition takes place. These settings influence the meaning and behaviour of activities (John, 2006). It is the interaction of schemas and context during the sensemaking process that generate temporary thoughts, also known as situated cognitions (Elsbach, Barr and Hargadon, 2005).

The situated cognition theory is relevant to this research on the relationship between office-free workspaces and communication, as it portrays how sensemaking about communication unfolds in social contexts (i.e., with colleagues and teams) and physical contexts (i.e., a culturally constituted environment such as an organisation).

This Master's research examines how workers make sense of organisational communication in a workplace setting which is an entanglement of social and physical elements. Elsbach, Barr and Hargadon (2005) describe situated cognition as momentary opinions of individuals or collectives who are mutually involved in events within a particular organisational, and thus social, context. Further to this, Semin and Smith (2013) advocate for the study of cognition to be perceived as socially situated, but also considered in the physical context in which it occurs. Moreover, situated cognition can be considered as a continual sensemaking process, which aims to make meaningful the ongoing stream of experience (Weick 1995).

Elbach, Barr and Hargadon (2005) analyse the recursive interaction of situated cognition, of how elements of a situation influence and evoke cognitive representations, and in turn, how these representations influence elements of the situation to make them significant.

Because situated cognition theory is founded on three core elements- individual cognitions, social contexts, and physical contexts- the theory is relevant to this research, as these are the fundamental components being investigated. 'Individual cognition' contains memories, attention, knowledge, learning and perceptions which are drawn on by people to make sense of experiences, situations and places (Semin, Garrido & Palma 2012). These cognitive elements are reflected in actions such as physical movements and verbal communication. 'Social context' refers to cognition being dispersed, such as when engaging with others, individuals share their knowledge, preferences, and memories. Thus an individual's cognitions are entangled and conveyed in social interactions with others. Finally, as argued by Clark (1997), the physical environment may act as a framework for cognition, as physical objects such as technology and equipment are artefacts that materialise and transfer knowledge between individuals. Thus, in terms of this research, the contemporary work environment can be considered as the framework for organisational communication, as this involves interaction within the physical workplace environment. Therefore, this research explores individuals' cognition, specifically the sense they make of the way they choose to communicate within their workplace environment.

2.6 Sensemaking

When studying the construction of meaning, the term 'sensemaking' is often adopted. Sensemaking is described by Morgan, Frost & Pondy (1983) as a process that is used by people to make their experiences: "accountable to themselves and others" (p.24) and

therefore make “sense” of situations. Weick (1995) goes further and states that sensemaking is a process based on plausibility, coherence, reasonableness, invention and creation, rather than accuracy. Thus, it focusses the researcher’s attention on discovering the subjectivity of a “person’s socially situated, constantly evolving, retrospective sense of a phenomenon, and most importantly, how they create this sense” (Mills, 2010, p. 217), instead of searching for an objective and generalisable version of the phenomenon being researched.

When a researcher studies sensemaking, their fundamental research questions are concerned with how and why individuals interpret and communicate their own world, consequently constructing their sense of reality (Weick, 1995). Accordingly, sensemaking is an important notion when seeking to understand an organisational phenomenon from the perspective of the organisational members - the overall objective of this research. The research questions are aimed at exploring how the participants make sense of communicative practices in a contemporary and office-free work environment.

Mills (2002) notes that literature has explored the concept of workplace sensemaking, but only a few studies have concentrated specifically on making sense of communication. Several studies focus on sensemaking in terms of significant change processes such as a new CEO (Mills, 2010), sensemaking of senior managers and subordinates in a merger situation (Brown & Humphreys, 2003), and sensemaking about an environmental change from traditional office spaces to nomadic working (Bean & Eisenberg, 2006; Bean & Hamilton, 2006). In line with these last two studies, this research seeks to explore the constitutive nature of communication, sensemaking, space and technology in a unique environment, in this case an activity-based working, office free workspace.

A study by Mills (2002) concluded that there is an association between sensemaking of communication and physical geography, as an employee’s reality (i.e., sense) is shaped by the physical geography in which it occurs. This suggests that the relationship between sensemaking, communication and space is important when understanding employees’ work experiences.

Weick (2009) describes the process of sensemaking as when individuals extract cues from situations and use these to retrospectively generate plausible sense, which is continually updated and refined. This sense is conveyed using language in talk, or other forms of communication, thus bringing entities such as organisations into existence through communication. The language used when sensemaking “captures the realities of agency,

flow, equivocality, transience, re-accomplishment, unfolding and emergence" (Weick, 2009, p. 132).

This research is firmly grounded in the field of sensemaking, as the researcher is seeking to explore the unpredictable, variable, and changeable nature of each participant's experience of working in a contemporary work environment. Adopting a sensemaking perspective in the current research allows the participants' experiences of communication in a contemporary, office-free work environment to be understood from their point of view.

2.7 Chapter Summary

This literature review examined the literature on organisational communication and the scholarly perspective of CCO, followed by a review of how the physical work environment has been researched. This illustrated how similar research had been undertaken, and highlighted gaps in current literature.

Firstly, the understanding of moving to a contemporary workspace such as ABW from offices, and the impact on workplace dynamics of such a move, is somewhat limited. Previous research has produced mixed findings, suggesting that there is no simple correlation between work environment and work practices (Irving, 2016). Secondly, researchers have been preoccupied with elements such as job satisfaction and privacy (Baldry & Barnes; 2012; Kim & de Dear, 2013; Parkin et al., 2011; Sundstrom et al., 1982). Thirdly, current literature on the workspace does not include an examination of process-based theory that simultaneously includes sociomateriality and situated cognition theory and captures the changing nature of the context and enactment of workplace dynamics.

This literature review has revealed that there is scope to further explore the impact of office-free contemporary workspaces on work dynamics. Furthermore, it highlights the need for more perspective when investigating how organisational phenomena are experienced by those participating in them.

The next chapter will review the methodology used to answer the research questions. This chapter introduces the paradigm informing how this study was conducted. Next, it explains the process and justification behind the data collection techniques. Lastly, the chapter explains the limitations and challenges of the methodology, and the ethical considerations.

Chapter 3: Methodology

3.1 Introduction

The focus of this research is to explore the participants' sensemaking accounts of communicative practices, to provide a rich description of their experience of how the physical work environment influences interactional dynamics. Because the focus was on understanding the participants' subjective experiences, the researcher selected an exploratory interpretive approach which employs an inductive qualitative methodology to theory building. The use of semi-structured interviews, non-participant observation, and field notes were selected as the data gathering techniques. The data analysis process implemented a thematic analysis, followed by secondary coding drawn from the extant literature.

This chapter explains the chosen research methodology that was applied to answer the research questions outlined in Chapter One. First, the chapter analyses the scoping phase of the research, outlining the site of the research and providing the context of the organisation and work environment. Next, this chapter reviews the paradigm that informs this research. The following section discusses both the process and justification for data collection. Finally, this chapter reviews the quality of data gathered, and ethical considerations.

3.2 Research Scoping

The research site for this study was a large private organisation. It was thought to be an ideal location for studying a contemporary workspace for numerous reasons. First, it has a diverse workforce which includes highly qualified managers, engineers, and analysts, skilled technicians, and sales and customer representatives. Second, these employees all work in a purpose-built facility which received noteworthy attention, including a commercial architecture award, for its elegant interior and exterior. The space has also been recognised for how it supports an innovative ABW mode and is deemed to be at the leading edge of commercial facilities in New Zealand. Third, scoping investigations revealed that the organisation is technologically sophisticated, so it presented the opportunity to research both formal and informal communication (e.g., intranet, face-to-face meetings, email and video conferences). Fourth, the organisation is driven by its values of passion, respect, integrity,

innovation, delivery, and empowerment. The impact of innovation, in conjunction with rapid growth since 2014, motivated the move to their dynamic workspace in 2016. Fifth, the organisation had previously completed some minor reviews on the ABW model. This new research gave them the opportunity to augment their previous internal reviews with an external project.

Access to the organisation was obtained by enquiring and developing a contact who was able to put the researcher in touch with an organisational advisor for the research. This individual acted as an advisor with the authority to provide access to research participants. The advisor provided valuable organisational context and acted on the researcher's requests. This supported an emergent and negotiated form of sampling which reflected the researcher's growing understanding of the situation. From the beginning and throughout the study, regular communication between the researcher and the advisor was maintained, to ensure that both parties were comfortable with the research progression.

3.3 Paradigm

A paradigm is "a term deriving from the history of science, where it was used to describe a cluster of beliefs, and dictates that for scientists in particular disciplines influence what should be studied, how research should be done, and how results should be interpreted" (Bryman & Bell, 2016, p. 726). A paradigm choice is ultimately a value-based decision made by the researcher, as they are reviewing the world through their respective "lenses". These differ according to the society, culture, and life experiences (Chua, 1986).

When developing a philosophical perspective, the researcher makes several assumptions in relation to the nature of science and the nature of society (Denzin & Lincoln, 2011). The first step when determining a methodology is deciding on a philosophical approach. This is known as the ontological orientation of the research, taking either an objectivist or subjectivist approach. Though subjectivism and objectivism sit at opposing ends of an ontological continuum (Holden & lynch, 2004), both perspectives have the same four assumptions: ontology (nature of reality), epistemology (nature of knowledge), human nature (controller or controlled) and methodology (Holden & Lynch, 2004). The choice of ontology influences the epistemological choice in terms of the researcher's role in creating knowledge and determining whether human nature is pre-defined or not. The nature of society or

assumption considers whether the researcher views humans as the controlled or the controller (Holden & Lynch, 2004).

Bahari (2010) defines ontology as: “ontology is about the nature of the world – what it consists of, what entities operate within in it and how they interrelate with each other” (p. 23). Assumptions of an ontological nature are concerned with whether reality and its meaning exist independently of individuals (Bryman, 2004). This is known as a positivist perspective. If reality is presumed to be socially constructed and a matter of individual perception, this is a subjective perspective. From a positivist perspective, reality exists in the world outside the individual. Whereas from a subjective perspective, there are multiple realities (Gray, 2014) which are determined internally in the mind of an individual (Burrell & Morgan, 1979). This choice between different ontological perspectives of reality is a defining point of the research and is reflected through an individual’s answers and actions (Burrell & Morgan, 1979).

This Master’s research is informed by an interpretive paradigm which embraces a relativist ontology, supporting the notion of multiple realities, and the researcher has numerous ways of identifying them (Morgan & Smirch, 1980). The choice of ontology influences the epistemology and vice versa (Crotty, 1998). Rohleder & Lyons, (2014) state that as ontology and epistemology are unavoidably entangled and are complementary in nature, this results in each being closely aligned to the other.

Epistemology is a theory of knowledge that outlines what is considered acceptable knowledge (Bahari, 2010). Epistemology describes the relationship between the researcher and the object(s) being researched - in other words, how knowledge is obtained (Burrell & Morgan, 1979). When a researcher is selecting an epistemological position, they need to identify, explain, and justify their philosophical foundations. (Crotty, 1998). There are three broad groups on a continuum used to describe the different epistemological perspectives: objectivism, subjectivism, and constructionism. Each of these perspectives is informed by different theoretical underpinnings, and constructivism can be considered as the middle ground between objectivism and subjectivism (Crotty 1998).

An objectivism perspective sits at one end of the continuum and is focused on the ability to test theory. The researcher produces the theory based on literature, then through data collection and analysis, tests the theory (Brown, 2017). Objectivist epistemology uses natural science approaches and applies these to the social sciences (Bryman & Bell, 2015).

At the other end of the continuum, a subjectivist epistemological perspective seeks to comprehend the world of lived experience, from the perspective of those who live in it (Locke, 2001). Therefore, there is an emphasis on the diversity of understandings that can be applied. Research from an interpretive paradigm focuses on the "actors", who understand the meaning of a phenomena being studied. Consequently, their opinions are portrayed through the research, and gathered through an inductive approach.

A constructivist epistemological perspective is placed in the middle of the continuum. From this perspective, knowledge does not exist outside an individual's mind. Reality is viewed as a social construction - the belief that reality or truth is constructed by individuals or groups (Chua, 1986). It is closely aligned to the interpretivist paradigm, sharing common logical origins (Chen, Skek & Bu, 2011). This suggests that social reality is not a given, but is constructed over time through shared experiences, communication, and history (Locke, 2001).

An interpretive paradigm and relativist ontology assume a social constructionist epistemology, and therefore this Master's research assumes a social constructionist epistemology.

Moreover, a research paradigm includes axiological and methodological assumptions (Denzin & Lincoln, 2011). Axiology is concerned with the role of the researcher and the influence of their interests, such as their values, ethics and moral conduct on the research (Carter & Little, 2007). Lastly, the methodology used describes the methods selected by the researcher to undertake the research, e.g. an inductive or deductive approach. Holden & Lynch (2004) outline that methodologies can be logically associated with research paradigms, in terms of the assumptions that are made.

A subjective ontological position and a social constructionist epistemological perspective has been applied to this thesis, accepting that individuals apply their own understanding and meaning to objects and their reality. This also accepts that there are multiple socially constructed realities, and meaning is assigned by individuals to their own experiences of reality (i.e., a social constructivist ontology). The social constructionist perspective is applied to investigate how the workspace arrangement has influenced employees' workplace practices, particularly communication. This suggests that as the social climate of the participants is created by them, the most appropriate way to study this is through their perspective.

3.4 Weick's Interpretative Approach

Further to the above, this research adopted Wieck's qualitative interpretive approach (1996) to inform the data analysis process. Klenke (2008) suggests that this approach is valuable when the researcher is seeking to understand the sense and meaning that individuals make of their experiences, from their own perspective. The process of gathering thick description from a participant generates rich data that are embedded in that participant's own sensemaking about their experiences and perceptions. This approach is supported by Sarah Tracy, a well-respected communication research methods scholar, who states, "The interpretive paradigm suggests that it is absolutely necessary to analyse social action from the actor's standpoint" in order to "see the world from the participant's eyes". (Tracy, 2013, p.41). Given that the purpose of this research was to understand experiences of working in an open-plan workspace, Weick's interpretive approach was judged to be an excellent fit. It was used to guide the process used to gather the participants' authentic experiences and perspectives on their workspace. More specifically, this approach ensured that the interview questions and structure focused on how the participants negotiated their communication in the contemporary workspace.

3.5 Justification for Paradigm

A subjectivist/interpretivist paradigm was selected as the most appropriate for this research for numerous reasons. The researcher acknowledges and accepts the opinion of Crotty (1998) that individuals' interpretations of reality, their values, views, and constructions of knowledge differ across groups and social settings, according to the culture and society they belong to. Accordingly, it is considered that the values and views of the employees will differ in relation to their new workspace. Therefore, interviewing a functional transect will allow for a variety of opinions to be considered and examined.

Lastly, the ontology which underpins the subjectivist perspective is well suited to the phenomenon being researched because this research is focused on exploring individuals' experience of work practices in contemporary spaces. Carrying out research from a subjectivist, social constructionist perspective advocates that in order to understand the world, a researcher must actively engage with and participate in it (Locke, 2001).

3.6 Research Design

The research design of a study displays the relationship between the research methods and the research questions. Ritchie et al. (2013) state that a consistency between these elements produces both reliable and valid data. Research questions can sometimes initially be too broad, as the scope of the research is being determined, however they may also be too narrow, resulting in the researcher restricting the possibility of discovery (Flick, 2004). Below are some of the guiding questions of this research which explore how the workspace layout shape:

- Workplace practices (specifically communication) and work experiences?
- The way workers interact with others?
- The way they organise their work?
- What adaptations have been necessary for workers as they moved from working in a traditional office arrangement to this new contemporary arrangement of workspaces?
- What do organisational managers, leaders, change consultants, and building designers or architects, need to consider when making changes to the physical work environment?

These questions emphasise the exploratory nature of the study, while guiding the researcher to focus on investigating the relevant topics. They also help to guide the interview process when the researcher is actively engaging in the data gathering process.

Due to the exploratory nature of this study, a qualitative research method was selected as the most appropriate. Initially, the secondary data was gathered from previous organisational communication and contemporary workplace studies. In conjunction with this, researcher knowledge helped to guide the research questions into subgroups based on gaps identified in literature as well as organisational perceptions and interactions. This knowledge would subsequently allow for a greater understanding of organisations and individuals and the behaviours, attitudes and actions that may be present. Primary data was collected through semi-structured interviews with the sample of participants selected from one organisation's pool of employees. The data gathered during this process was analysed using a thematic analysis. Based on the organisational chart supplied to the researcher, it was judged that the participants appropriately characterised and reflected the organisation. The following sections evaluate the data gathering and analysis process in greater detail.

3.7 Data Collection

The data collection stage is a significant part of the research journey. The section below outlines how the sample was selected, the collection method and analysis.

3.7.1 Sample Criteria

It is essential to collect data from a representative sample of a population (Bartlett, Kotrlik, & Higgins, 2001), therefore the researcher should consider the sample size and selection criteria. When selecting participants, it is important to use criteria to distinguish suitable candidates from those unsuitable. Additionally, to give researchers using comparable methods the ability to acquire similar results, it is essential to outline the criteria which influenced decision-making (Merkens, 2004), therefore, this section outlines how the researcher determined the research sample.

Previous research within organisational communication and space has predominantly concentrated on gathering data from employees (e.g., Baldry & Barnes, 2012; Irving, 2016; Kim & de Dear, 2013; Sundstrom et al., 1982; Van Marrewijk and Van den Ende 2018). A similar approach has been taken in this study, with interviews being conducted directly with employees.

For this research, each participant had to identify as being currently employed by the chosen organisation. They either began working in the new building recently, or had worked in the older premises and were involved in the change process. For ethical purposes, all participants were confirmed to be over the age of eighteen.

3.7.2 Sample Recruitment

The process of recruiting participants was undertaken in a systematic manner, to ensure that participants were representative of each department, hierarchy, communication channels, tenure, and sociability. At the request of the researcher, the organisational advisor obtained an initial sample of seven candidates with varying opinions of, and relationships to, the new workspace.

The process began with the organisational advisor approaching initial participants on the researcher's behalf. Subsequently, a combination of a chain referral or snowball sampling

technique was applied, whereby employees recommended others who possess suitable characteristics (Biernacki & Waldorf, 1981). Following the first round of interviews, an organisational chart was provided to the researcher, which was used to identify potential departments or positions that would provide a different perspective. The researcher then asked to interview individuals from specific departments who had not yet been included in the study. This was the chosen sampling method due to the significance of utilising the existing social capital of the organisation and accordingly drawing on each employee's organisational knowledge.

This sampling process was influenced by the willingness and availability, as two individuals had to withdraw due to increased workload. Participants who had their details passed on to the researcher were contacted via email and provided with an explanation of the purpose of the research, along with the Information and Consent Sheet (Appendix 1 & 2). As chain-referral was the primary sampling technique, the researcher reduced the chance of superior compulsion when recruiting participants by ensuring that permission was granted by the participant themselves through signing the consent form, via email when booking the interview, and lastly, verbally before the interview commenced. Overall, this sampling method produced 14 employees from a diverse cross section of the organisation who agreed to participate.

Two distinct groups - newer recruits and longer-term employees – were selected from across all departments, because they collectively constituted a functional transect of the social, communication, and space environments within the organisation.

Table 1 below displays an overview of the participants in this study.

Table 1: Summary of Participants

Number	**Participant code**	**Gender**	**Length of tenure**	**General position**
1	GC	Female	9 years	Space Manager
2	SS	Female	5 months	Communications Advisor
3	DS	Male	18 years	Strategy Manager
4	SR	Male	8 years	Lead Engineer

5	LT	Male	11 months	Information Manager
6	HL	Female	1 year	Intern – graduate program
7	SJ	Female	1 year	Support staff
8	SP	Female	3 years	People Manager
9	BK	Female	7 years	Executive Assistant
10	PJ	Male	8 years	Customer Services Manager
11	MI	Male	7 years	Engineer
12	FT	Male	9 years	Lead Engineer
13	NB	Female	2.5 years	Technology Team Leader
14	HE	Female	2 years	Intern – graduate program

3.7.3 Semi- Structured Interviews

The interview guide (Appendix 3) shows a structured interview approach, with several questions and categories. However, the researcher found that as the interviews progressed, a less structured approach was adopted as some parts of the interview were shaped by the conversation and areas of interest that arose. Moreover, the researcher found that participants could respond to a few of the formal questions with a single response, thus, the interview procedure was deemed as primarily semi-structured.

A semi-structured interview provides the researcher with an opportunity to gather an in-depth understanding of the opinions of participants who are involved in the research. They also provide the researcher with flexibility to enquire and discuss a range of topics, meanings, and motives as they emerge during the interview (Hopf, 2004). This approach gave the researcher scope to seek further information in order to fully understand the interviewee's perspective.

When choosing a research method, it is vital that the researcher considers the association between the method and the anticipated findings of the study. Semi-structured interviews were considered to be the most suitable approach for this study, as they could elicit participants' perspectives and opinions on their social world and professional experience. They also allowed for the researcher to discuss complex, sensitive, or personal topics with participants and seek further clarification (Barriball & white, 1994). These aspects are particularly fundamental when the broad goal of the research is to comprehend a

phenomenon, in this case, the organisational communication in space, from the perspective of the participants.

As alluded to above, when conducting semi-structured interviews, it is necessary to provide some guiding questions. These include key fixed questions, as well as additional questions which can be included to explore topics that emerge (Cachia & Milward, 2011). The latter provide the researcher with flexibility to deviate from the key questions when discussion arises on other relevant areas that may otherwise have been overlooked (Cavana, Delahaye, & Sekaran, 2001). However, it should be noted that in order to openly discuss experiences, attitudes and behaviors, the researcher needs to put the participants at ease and establish rapport (Cachia & Milward, 2011). Therefore, the character and communication style of the researcher is essential to consider. In this study, the researcher ensured that email communication prior to interviews with participants was pleasant and appreciative. Furthermore, during the interview, the researcher expressed an open-minded and calm demeanor, to ensure that participants were comfortable sharing their opinions. Appendix 3 displays the interview guide used for this study, beginning with conversational and general open-ended questions on topics that the participant could be assumed to be comfortable discussing, as this helped to build rapport. The next phase of the interview was more detailed and explored the main foci for the research, such as communication and work practices.

Initially, employees were approached by the organisational advisor on the researcher's behalf, and offered an information and consent form (Appendix 2) which outlined the purpose of the research, and requested consent to carry out a semi-structured interview. Following this, the researcher contacted the individuals who expressed interest, and arranged for interviews to be conducted using a combination of face-to-face and electronic mediums such as Zoom. For convenience and greater appreciation of the workplace, the researcher travelled to the organisation twice for a total of four days to complete face-to-face interviews. All interviews were audio-recorded- usually the researcher ensured that the participants were comfortable with this before beginning the recording. Bryman, (2016) outlines several reasons and advantages for recording interviews, including: it allows for a through and repeated examination of the conversation, it helps to correct the natural limitations of the researcher memory, and it permits a researcher to focus during the interview and listen, instead of being concerned about note taking.

The interviews varied in length from 41 minutes to 63 minutes. The number of participants interviewed was determined when the researcher reached saturation, where no new information was being discovered (Goulding, 2005). To guide the initial estimate, the researcher assumed that saturation is usually achieved after 12 interviews and certainly by 30 (Qu & Dumay, 2011). In the end, a total of 14 semi-structured interviews were conducted. At this point the researcher judged that saturation had been reached, with the themes well established and no relevant or new information forthcoming to modify these themes.

Fourteen was judged to be acceptable, as a similar study on open-plan offices carried out by Van Marrewijk and Van den Ende (2018) interviewed 12 participants. Additionally, Guest et al. (2006) suggest that after 12 interviews, a saturation point is often achieved. Fourteen interviews fitted easily into the researcher's timeframe and the scope of this research project.

The interviews were an opportunity for the researcher to ask the participants about their experiences in the work environment and how they made sense of them (sense-making). Saunders, Lewis and Thornhill (2007) state that an inductive approach gathers empirical data and develops a theory based on the observation of the data. This method involves going back and forth between the data and the emergent analysis, searching for relevant correlations and differences. Accordingly, at the conclusion of each interview, the researcher reflected on the interview and noted down the tone, surprising or new information, language construction, and other interesting aspects that occurred, overall capturing the tone of the participant's narrative, and this was compared with the emerging analysis gained from previous interviews. This formed part of a recursive process where data collection and analysis were coupled. The researcher took a theme and an idea from one interview, then explored this with the next person interviewed. The post-interview reflection process also allowed for an accurate record of data to be stored by the researcher prior to transcribing the full interview. This safeguarded the researcher should the recordings be accidentally lost or damaged.

Overall, the process of semi-structured interviews was utilised to gather a broad sample of perspectives, sense-making accounts, and experiences on communication, sociability and working practices in a contemporary and innovative works environment. The researcher followed an iterative process of data gathering and analysis, whereby the information was revisited multiple times and the analysis adjusted to answer the key research questions.

3.7.4 Transcription

A transcription allows for a detailed examination of language (Lapadat & Lindsay, 1999), and can be described as "the graphic representation of selected aspects of the behaviour of individuals engaged in a conversation" (Kowal & O'Connell, 2004, p. 249). Researchers have argued that transcription should be viewed as a significant segment of the data analysis process (Bird, 2005), as it familiarises the researcher with their data. In addition to the verbal component, scholars such as Halcomb and Davidson (2006), have suggested the inclusion of non-verbal components such as emotions.

In this research context, transcripts were prepared on completion of the interviews. This created an electronic record of the conversation for further analysis, and the approach of Kowal and O'Connell (2004) was adopted. This accounts for wording (verbal features), and acoustics such as pitch and loudness of any non-linguistic aspects (e.g., laughter and emotion). Thus, the transcripts were inclusive of non-verbal cues and actions which added to developing a rich depiction of the data (Beck, 1993).

In line with ethical considerations and privacy, the researcher carried out each transcription and participants were sent their transcripts for verification. This provided participants with an opportunity to give any feedback, or remove sections, prior to data analysis commencing.

This transcription process took a systematic and consistent approach to recording all data, using the same device and approach. Additionally, the accurate recording of data allowed the researcher to both review all responses, and revisit the data later, when the emerging conceptual model was considered in relation to the literature.

3.7.5 Non-participant observations

To support the interviews, the researcher engaged in a guided tour of the organisation's workplace, and deliberate non-participant observation, with the intention of understanding the physicality of the situation in which, and about which, the participants were making sense. The researcher carried out observations during down-time between on-site interviews. The findings from these were used in conjunction with the interview and treated as supplementary findings, as well as sometimes providing the basis for questions raised in interviews, to better understand the emerging interpretations. Additionally, these observations helped to confirm some of the sensemaking accounts provided during the interviews and gather context and understand of the embodied nature of participants' experiences. As Hutchins (1995) states, cognition is best captured 'in the wild'. In doing so he is proposing

that observation is the most suitable method to gather information on the way that individuals communicate in, and influence and are influenced by, their physical environment.

However, non-participant observation was not selected as the chosen primary data collection method, given that it does not allow for participants to provide a reflection on their behaviour in a variety of settings. Instead, the researcher is tasked with deciphering the participant's meaning from their own interpretations. In other words, observations alone do not allow the researcher to gather participants' accounts of reflections on their own experiences. Bryman (2016) agrees, noting that, in comparison to non-participant observation, interviews allow for an efficient and in-depth understanding of phenomena from the sensemaker's point of view.

3.8 Justification for Data Collection

This research contributes empirically grounded exploration to the current conversation and growing research on employees adapting to open-plan work environments, such as activity based working models. The study applied a qualitative research approach, encompassing recorded semi-structured interviews and non-participant observations. Other qualitative data collection methods such as video recording, focus groups, and analysing text or documents (Silverman, 2006) were not chosen, as the combination of the two methods used provided sufficiently rich data on participants' workplace experiences and the sense they made of these.

In qualitative research, the researcher becomes heavily involved in the experience, as they seek to describe the participant's point of view (Merkens, 2004). As noted by Silverman (2001), the intimate involvement of the researcher allows for extensive noticing, examining, and exploring of the situation. This method of research is in line with the objective of this study, which is to understand an organisational phenomenon from the perspective of the organisational members.

Another advantage of semi-structured interviews is that they provide an interviewee with the opportunity to discuss significant insights as they arise during the conversation (De Paoli & Ropo, 2015). Semi-structured interviews were also chosen because they allow a somewhat balanced approach to the interview process, being neither prescriptive nor completely unstructured. Structured interviews were not selected as they do not allow for exploration of interesting topics which may arise. Un-structured interviews were not selected as they permit potential disorganisation of the interview procedure, perhaps causing it to run over the

specified time. Additionally, there is a chance that the main themes being explored will be neglected if conversation should deviate from the topic.

In this study the researcher was also given access to archival data such as organisational statistics on space use, floorplans, diagrams of organisational structure, and photos of the office space. These were used to both confirm and support claims made by participants during the interviews.

3.9 Data Analysis

It is important to provide a detailed and transparent account of how the data gathered was analysed, for two reasons. Firstly, to allow others to evaluate and compare the research, and secondly, so others can synthesise the findings in future studies (Braun & Clarke, 2006).

3.9.1 Primary Coding - Thematic Analysis

This research adopted an inductive, qualitative approach and more specifically, a thematic analysis method. This is a method of "systematically identifying, organizing, and offering insights into patterns of meaning (themes) across a data set" (Braun, Clarke, Hayfield & Terry, 2019, pg. 57). It categorises the data into themes according to the research question, thus providing a complex and comprehensive account of the data. Additionally, this method interprets several features of the research phenomenon (Boyatzis, 1998) and permits the researcher to compare their findings to one another (Braun & Clarke, 2013). Moreover, the analysis allows for the researcher to recognise patterns which subsequently can form themes or categories that are analysed further (Fereday & Muir-Cochrane, 2006). The themes identified may be examined further too systematically establish connections and produce higher level categories.

Braun and Clarke (2006) outline one of the benefits of thematic analysis as flexibility, as it can be applied to numerous pieces of research, with varying theoretical and epistemological assumptions. Additionally, it does not adhere to a foundation of language or other frameworks that explain human behavior, because it searches for unique patterns irrespective of language (Braun & Clarke, 2013).

When conducting a thematic analysis, it is vital that the researcher makes the right strategic decisions. These decisions include determining what is and what is not a theme, whether the research is using an inductive or theoretically driven analysis, and how this is linked to

ontological and epistemological assumptions of the research (Braun & Clarke, 2006). When the intention is that the themes identified are strongly linked to the original data (i.e., emerge from it), an inductive method is used (Patton, 1990), whereas with a theoretical analysis, the coding is influenced by the researcher's analytical interest area (Braun & Clarke, 2013) and as a result the process is deductive. Additionally, when doing a thematic analysis, a decision need to be made, regarding the levels of themes being analysed, whether to adopt a sematic or latent approach (Joffe, 2012). A sematic approach is when the researcher's primary interest is in the meaning of the data. This is found in what participants say, and thus requires analysis of the surface meaning of the data. In contrast, a latent approach is more detailed than a sematic approach, interpreting the meaning of the data by recognising the assumptions, ideas and concepts that underpin the data (Braun & Clarke, 2006). In line with this, Patton (1999) states that the researcher must demonstrate intellectual integrity when they consider alternative themes that emerge from data collection and discuss how these are determined. With a latent approach, themes tend to be seen as a socially co-constructive achievement and should be aligned with the epistemological assumptions of research.

This research follows the six phases for conducting a thematic analysis outlined by Braun and Clarke (2006). These are:

- Familiarise yourself with your data.
- Assign preliminary codes to your data in order to describe the content.
- Search for patterns or themes in your codes across the different interviews.
- Review themes.
- Define and name themes.
- Produce your report

In phase one, to become familiar with the data, the researcher transcribed her interview notes. At the conclusion of each interview or set of interviews, and before the next where possible, the researcher engaged in a process of data immersion. This involved listening to the interview recordings and creating detailed transcriptions as a record. Following this, in phase two, the researcher read over each transcript several times, assigning preliminary codes to sections of data that related to the research questions, then going through the whole coded transcript once more to confirm these initial codes had been assigned consistently.

Clarke's (2006) advises that a researcher should collate codes by compiling the codes into broad themes. In the Third phase, eleven initial themes were developed from the data set. Phase 4 involved reviewing the themes. To do this the researcher developed a 'thematic map' (See Table 2). This was followed by phase 5 which involved refining themes, completing more interviews, and comparing the coding of these with previous ones. In addition, some of the original participants were revisited, to clarify points and ask further questions.

This process subsequently produced six key themes that held the most significance to the research questions. These are displayed in Table 2. There are sub-themes grouped under these six key themes: physical context, social context, presence at work context, position representation, etiquette expectations, and person representation. Step 6, writing the report, began after a secondary phase of coding was completed.

In the secondary phase of coding, a model was produced that contained second-level themes. This coding built on phase one coding. The model (Figure 3) is presented in the Findings (Chapter 4). The interview transcripts created from the audio recordings allowed for quotations of varying lengths from the interviewees to be utilised in the Findings (Chapter 4) to illustrate the findings and show links to relevant literature in Chapter Five. By following Braun and Clarke's (2006) steps in phase one coding, the data fit between data and the research objective was optimised.

Table 2: Map of Thematic Analysis Process

Key words from transcripts		**Initial themes**	**Key themes**
• Benefits • Presence • Technology • Adaptations • Expectations • Collaboration • Information sharing • Change • Observation • Workspace choice • Flexibility	• Interactions • Sharing • Attitude • Experience • People • Space • Disadvantages • Connect • Team • Communication • Decision making	• Negation with artefacts • Technology	Physical context
		• Information sharing • Communication • Teams	Social context
		• Presence • Co-presence • Absence	Presence at work

• Independence • Sense of belonging	• Workflow & practices • Preference • Materials • Informal conversation	• Position characteristics • Practices	Position representation
		• Sense making (present throughout)	Etiquette Expectations
		• Personality	Socially indexed self-representation

3.9.2 Secondary Phase of Coding

Following the phase one process of thematic analysis, the researcher conducted a secondary phase of coding, defined by Sarah Tracy (2013) as secondary-cycle coding. This involved amalgamating, organising, and classifying the primary themes into second-level codes (Tracy, 2013). During the coding process, the researcher kept analytic memos which provided a space for recording ideas on the connections which could be drawn between data and literature. These accounts act as a means to "dump your brain" (Saldana, 2009, p.32) for the researcher, who can revisit them many times as they reflect how the themes from the thematic analysis fit together at a higher conceptual level.

Tracy (2013) advocates that a researcher should be well-read in their topic, as often second-level codes can be drawn from disciplinary concepts in the literature. With this in mind, over a period of several hours and with the guidance of the primary supervisor, the researcher considered numerous terms and extant concepts from the literature that had the potential to embrace some or all of the thematic codes. The concepts were sought to capture the essence of the study's main findings. This process was conducted using sheets of paper that allowed possible arrangements of thematic codes and higher order concepts. These concepts could be visually linked to produce tentative conceptual models, which were checked against the findings to determine whether they were able to be fully supported empirically. As part of this model design, checking, and discussion process, there was consideration of the primary themes in relation to concepts from the literature, such as sensemaking, materiality, sociomateriality, communication constitutes the organisation, situated cognition, situated learning, embeddedness, distributed cognition, geosocial environment, the physical work environment, and concepts used to describe the ABW model.

Eventually, after discussing which themes informed others, a higher-level representation of the relationships between themes was found. Initially, the researcher borrowed the concept of sociomateriality (Orlikowski, 2007) from the literature to capture the interrelationships of the data in the thematic codes 'physical context', 'presence at work' and 'social context' and elevate these to a higher order category. The term 'sociomaterial effects' was created to capture the mutually constitutive nature of the physical and social elements of the work environment, and was a perfect concept to represent the interconnectedness that was evident in the way participants in this study described their communication in their office-free workplace.

The remaining themes of 'socially indexed self-representation', 'position representation' and 'etiquette expectations' were combined into a broader category called 'socially-situated sensemaking'. This was inspired by the concepts 'situated learning' (Lave and Wenger, 1991) and 'sensemaking' (Weick, 1995). According to (Weick, 1995) all sensemaking is social, therefore this term was crafted as it captures the way that sensemaking is indexed to the social dynamics and interaction that occurs in each workplace. Although the researcher realises that all sensemaking is social, socially-situated sensemaking attempts to capture the notion that the nature of the social dynamics has agency when making sense of the communication that occurs in the workplace, in the same way that situated cognition is indexed to a community of practice.

Together, these two concepts capture the workers' sense of communication as a dynamic process involving the coupling of the material and social elements of the workplace with elements of self, to create a nexus of meaning. This connection and the relationship to the primary thematic codes are visually displayed in a conceptual model (figure 6) in Chapter 5. This model is the primary contribution of this thesis.

3.10 Evaluating Data Quality

Conducting research to a high quality is a fundamental objective for researchers. Although the definitions of what constitutes high quality research in academia vary (Guba & Lincoln, 1981), it can generally be accepted that "data and information are of high quality if they are fit for their uses (by customers) in operations, decision making, and planning" (Redman, 2008, p.56). However, there has been lengthy discussion between scholars about how best to record qualitative data (Morse, Barrett, Mayan, Olson & Spiers, 2002), due to the complexity of qualitative data in comparison to quantitative data. To evaluate the data collected in this

research, Guba and Lincoln's (1981, 1982, 1985) notion of 'trustworthiness' has been selected.

Trustworthiness in qualitative research traditions is the equivalent of the positivist concepts of reliability and validity. Trustworthiness refers to four aspects of quality qualitative research; credibility, transferability, dependability and confirmability, which are more appropriate to those research paradigms that assume that there is not one objective truth, but rather multiple 'truths' that are dependent on an individual's experience of reality (Lincoln & Guba, 1985). This assumption is integral to the ontological position of the interpretive paradigm selected for this research. Shenton (2004) describes the evidence required to confirm that the four aspects are present in research. Firstly, he states that credibility is apparent when the researcher's study addresses what it proposes to address. Secondly, transferability is apparent when the researcher provides "sufficient detail of the context of the fieldwork for a reader to be able to decide whether the prevailing environment is similar to another situation with which he or she is familiar and whether the findings can justifiably be applied to other settings" (Shenton, 2004, p.63). Thirdly, dependability has been recognised as difficult when conducting qualitative research. To achieve this, researchers must clearly outline their process, to allow the study to be replicated in the future. Finally, confirmability occurs when the researcher can establish that the findings of the study have been achieved through the data analysis process, not from the researcher's prejudgements or bias. The sections below review the four aspects of trustworthiness in relation to this study.

3.10.1 Credibility

When conducting qualitative research, the process and outcomes of the study must be trustworthy, to ensure that users of the research can confidently trust the findings (Tracy, 2010). In qualitative research, credibility "measures how vivid and faithful the description of the phenomenon is" (Beck, 1993, p. 264). Thus, for research to be deemed credible, individuals who provided the data on the human experience will judge the researcher's interpretation. In this study, both the advisor and the participants endorsed the findings. Participants were provided feedback on their transcripts, with the comments made by the researcher, to ensure that the description of the experience resonated with theirs (Beck, 1993).

Patton (1999) outlines that credible qualitative research is dependent on three distinct yet related inquiry components. Firstly, the rigorous techniques and methods used for gathering

data are of a high quality, to ensure the analysis is trustworthy. The researcher needs to conduct a creative, yet systematic and methodical data collection process, and record this accurately, to provide readers with the information to evaluate the quality of the results. Secondly, credibility is reliant on the researcher's previous experience and training. Lastly, credible qualitative research requires an appreciation of the value of inductive analysis, qualitative methods, systematic sampling, and holistic consideration.

The data collection method chosen for this research, specifically the interview method, was not dependant on asking the same question repeatedly, but posed questions in each interview in a like rather than identical manner (Hardie, Shilbury, Ware & Bozzi, 2010), as a new question needed to take into account what had already been said. In some qualitative research approaches it is important to convey a consistent meaning across all interviews, however with inductive approaches, such as those employed in the various Grounded Theory approaches, it is not essential, or necessarily advisable, as the data gathered from each interview will inform the questions the researcher asks in the following interview.

In terms of participant's responses, not only can lexical and linguistic differences be expected but it is important to recognise individual subjectivities (Hardie et al., 2010). In this Master's study, care was taken to produce a credible study without using a constraining formula to gather the data.

3.10.2 Transferability

Transferability is not the primary concern of qualitative research in most instances. Rather, the intention is to understand the qualities of the phenomena being studied. For transferability to be claimed, subsequent replications are needed. However, even in a strongly positivist inquiry where transferability is more achievable, there will be some natural limitation to transferability. The qualitative researcher's responsibility is to ensure that the approach and methods are detailed sufficiently to allow replication to be accurately achieved.

Spiggle, (1994) argues how the qualitative researcher can enhance transferability in their study. He suggests that transferability can be increased by drawing data from multiple sources, to improve the ability of findings to be generalised. In terms of this study, observations were used alongside the insights provided by individuals with diverse levels of sociability, interaction, and direct reports – in other words, a functional organisational transect of participants.

3.10.3 Dependability

Dependability is increased by reducing the idiosyncrasies, and thus variability, in the interpretation of research (Baxter & Eyles, 1997). Moreover, it is proposed that the focus of dependability is on consistency between the researcher's findings with contexts over space and time (Baxter & Eyles, 1997). The primary researcher is responsible for handling and maintaining the dependability of the research, by ensuring the match between findings and interpretations for like data from the same context is consistent. When data interpretation is incorrect, such as when there are poorly defined analytical constructs and premature closure, dependability will be decreased (Baxter & Eyles, 1997).

Due to the researcher and the participants having varied philosophical perspectives, it is likely that there will be variation in interpretation. To reduce this Lincoln & Guba (1985) suggest that a third party, such as a second researcher, is used to review data interpretation. In this study a research supervisor reviewed the research process to ensure interpretation occurred in a consistent way. The relationship between the graduate and professor is described by Baxter and Eyles (1997) as an auditee-auditor interaction. This process has been labelled as an 'inquiry audit' (Krefting, 1991) and explains the process of a supervisor reviewing the process and product of research. A supervisor was involved across this research process, acting as an auditor by continually checking. In addition, the researcher kept detailed notes of interpretation and the meaning of codes, which were shared with the supervisor throughout the research journey. Initially, a research plan was developed by the researcher and adjusted as necessary throughout the research, with the guidance of a supervisor.

3.10.4 Confirmability

Confirmability can be attained once credibility, transferability and dependability are achieved (Thomas and Maglivy, 2011). Confirmability is defined by Lincoln and Guba (1985) as "the degree to which findings are determined by the respondents and conditions of the inquiry and not by the biases, motivations, interests or perspectives of the inquirer" (p.290). This means the researcher must not unduly influence the research, however in qualitative research it is accepted that researchers are an integral part of the research, by virtue of the decisions they make when designing questionnaires and interviews (Shenton, 2004), and in the way they conduct the data collection and analysis.

The qualitative researcher aligns with Lincoln and Guba (1985), who suggest that rather than trying to eliminate researcher bias, researchers should recognise how their values, interests and biases shape the findings. In terms of this research, when adopting an interpretive approach, subjectivity is a given, as the axiology of interpretivist research acknowledges the ethics, interests and morals of the researcher are embedded in the research. Essentially, in qualitative research, researchers tend to accept the role that their interests, perceptions and motivation play in the interpretations (Baxter & Eyles, 1997), as they draw subjective conclusions and understandings which mean neutrality is an illusion (Patton, 1999).

In summary, the methodologies offered by Lincoln and Guba (1985) and Baxter and Eyles (1997) were followed in order to improve confirmability. As suggested by Lincoln and Guba (1985), a primary and secondary supervisor from the university functioned as the auditors during the interpretation process. As highlighted by Baxter and Eyles (1997), the researcher acknowledged personal biases, including interests, values, and opinions, recorded these, and ensured regular reflection upon them. Finally, once the data was collected, any findings and analysis were supported by literature and previous research.

3.11 Ethical Considerations

Research in the social sciences often includes dealing with individuals, organisations and groups and this study is not dissimilar, as it required direct engagement with organisational members. It has been broadly established that dealing with other people can raise ethical issues. Consequently, it is necessary to be thoughtful and considerate, and perhaps as a researcher, take the position of a participant, to identify the ethical issues (Bouma & Ling, 2004). Therefore, this section will examine the potential ethical issues that could result from this study, and explain measures taken by the researcher to reduce these.

Being considerate of the participants is a very high priority, as the participants were asked to discuss their professional experiences and practices and how these have been influenced by the new workspace design. To some extent this research intrudes on their privacy by seeking the participants' personal opinions. An element of being considerate under such circumstances is being prepared, and providing the participants with a clear outline of what is expected of them. Furthermore, providing participants with as much information about the research as possible ensures that there is no deception. The section below outlines how the researcher considered the ethical nature of conducting research and engaging with participants.

During the recruitment stage of the data collection process, prior to conducting interviews, potential participants were offered an Information Sheet and a Consent form to review and sign if they were comfortable to contribute. The Information Sheet provided an overview of the research purpose, including topics of interest and an idea of what would be asked of participants. Additionally, the contact details of the primary researcher and primary supervisor were supplied, providing participants with two avenues to request a supplementary explanation. The consent form outlined details on the participant's rights in terms of privacy and data security. This ensured that participants clearly understood all aspects of their role during the research. Once signed, the researcher had permission to arrange interviews and use the data gathered and all involved had a mutual understanding of how data would be treated in terms of security and privacy. Following the interviews, the researcher provided a detailed and accurate copy of the interview transcript to the participant, allowing them an opportunity to alter and request the removal of any information they were not comfortable with including.

Due to the nature of this research, participants were informed that following submission, this thesis will be published on university databases and therefore will be a publicly accessible document. Consequently, the researcher ensured confidentiality for the participants by changing names and identifiers, and transcribing using codes so that names were concealed. In addition, only the researcher and her supervisor had access to the data, and all data such as transcripts and consent forms were stored by the researcher on a password protected device, which, as per regulation, will be kept for five years only, following completion of the research. The research had approval from the Human Ethics Committee prior to commencement and the researcher is confident that the precautions implemented fulfilled all relevant ethical requirements.

3.12 Chapter Summary

The aim of this chapter was to provide a comprehensive description of the qualitative research methodology adopted to answer the research question outlined in Chapter One. The chapter began by explaining the possible research paradigms, specifically focussing on the chosen interpretive paradigm that informed this research. It then discussed the data collection method of semi-structured interviews and transcription, followed by an explanation of the thematic analysis that gave rise to the findings. The chapter concluded with an overview of factors to consider when evaluating the quality data, and a discussion of the ethical concerns

of this research. Next, Chapter Four presents how the methodology was applied in practice by the themes that emerged in the analysis.

Chapter 4: Analysis and Findings

4.1 Introduction

This chapter presents the findings from two phases of analysis. Firstly, the thematic analysis of the texts from 14 semi-structured interviews, field notes and non-participant observation. Secondly, it presents the conceptualisation of the theme codes generated by this analysis. These analyses were conducted in order to understand the participants' experience of interacting within their office-free work environment and answer the research questions outlined in Chapter One.

It is important to note that, consistent with the interpretive research paradigm informing this research, the accounts gathered in the interview process must be treated as subjective, containing each participant's experience of their interaction in their new workspace from their point of view.

This chapter begins with an explanation of the themes that arose from the first stage of data analysis. Thematic coding was used to code participants' data into overarching themes. This approach is described by Braun and Clarke (2006). A total of six primary themes were generated through coding:

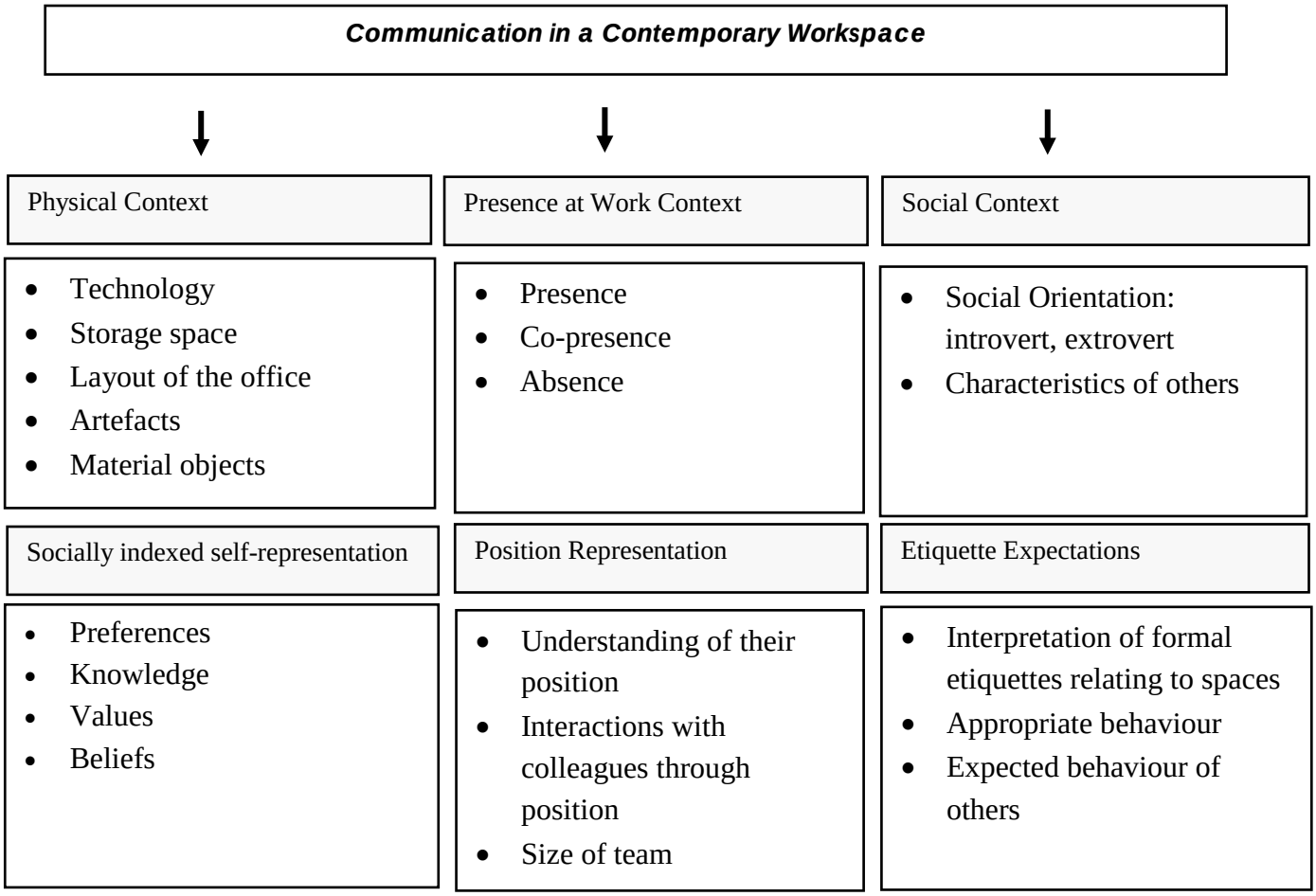
- Physical context
- Presence at work
- Social context
- Socially indexed
- Self-representation
- Position representation
- Etiquette expectations.

Beyond these themes, other findings from the interviews are discussed and presented separately.

The primary codes enabled the researcher to link the emerging findings to relevant literature through secondary phase coding (Tracy, 2013), which improved the quality of the data

conceptualisation in stage two of the analysis. Figure 3 below visually displays the six primary themes and associated topics found by this study. Interestingly, in their study of organisational situated cognition, Elsbach, Barr and Hargadon (2005) discovered similar sub-themes.

Figure 3: Themes When Making Sense of Communication in a Contemporary Workspace



4.2 Physical Context

Each participant was asked to reflect on their experience of working in their new work environment. The initial comments about the physical space were overwhelmingly positive, with many of the participants praising the design for its modern, functional, energising, attractive, empowering, airy and light composition. For example:

"I am proud, I own my job, it is empowering to work here." - ***BK***

"It feels a lot more energising". – ***DS***

*"Being modern it gives you the belief that you are coming to a modern and forward-thinking company." – **LT***

The quotations above demonstrate how the physical space was incorporated into the participants' sensemaking accounts, specifically how they attributed their optimistic perceptions about work to the contemporary workplace.

When asked their opinion of how the workspace influences their day-to-day work activities, the initial comments of the participants were divided. Their responses suggested a mixture of positive and negative impacts, with some of the participants focusing on the limitations, such as lack of personal space, decreased time spent with their immediate team. The data below reveal how some workers perceived the new workspace to offer both positive and negative affordances.

*"But I do find there are some drawbacks, as with all things, there are pluses and minuses and some of the drawbacks are around the ability to work closely with a team when often the best way to do that is to be seated in close proximity to each other." - **SR***

*"It does create some headaches as they have had to work harder in terms of how they share information, so working in space like this, they use confluences a lot so they all can see it. So, this means we have had to be smarter with technology as you can't keep things all in your own head." - **PJ***

*M*ost of the participants, however, directed their comments to the positive aspects, discussing the affordances of the space such as the increased socialisation and flexibility. Overall, comments like those below were most prevalent and demonstrate how the new workplace allowed an improved sense of organisational 'connectedness', which was attributed to reduced physical separation between departments.

*"We are building on our already open and transparent culture, and most people now feel comfortable to approach us." – **SP***

*"I find it really energising not sitting behind the same desk all day every day" – **GC***

*"I do really like the opportunity to pick and choose as I need." – **HE***

"Just this morning I have had two people come and talk to me. I would never get that otherwise. Interaction has been amazing, you feel part of the company and not so isolated." ***- BK***

In addition, half of the participants (N=7) specifically focused on the physicality of the work environment, touching on topics such as desk locations, acoustics, and comfort.

"Overall, I find it a very pleasant environment, very well designed in terms of acoustics and warmth. It's a lovely environment and I think we are very spoilt to have such a nice building" – ***SR***

"The noise level is significantly less here. I suspect that's the noise cancellation." - ***MI***

"I love the vibe and modern furniture." – ***LT***

"This is a marvellous building- the amenities and spaces are so nice." – ***SJ***

Figure 4: Interior view of the work environment, taken from level one of the building

Interestingly, the researcher noted that these initial comments about their attitude towards the space were often maintained throughout the interview as an undertone in the remainder of a participant's responses. It should be noted that overall, every participant was satisfied with the comfortable and modern space they worked in.

4.2.1 Material Objects

Material objects such as floors, doors, computer monitors and glass walls are a significant aspect in work practices and the identification of spatial settings (Irving, 2016). Other artefacts also transfer symbolic messages to employees, such as personal items which reflect an individual's interests and priorities.

The workplace contained some clearly labelled workspaces such as: "high focus" or "semi-focus" working areas. These labels were accompanied by some simple protocols on acceptable behaviour in the space. These markers acted as indicators for staff working in and around these spaces to ensure that they were aware of others' expectations. Other than these markers, there were plenty of areas that remained unmarked and therefore available to be used in a variety of capacities.

"I am a spatial person, so I am used to knowing where people sit. There is a reinforcement of who people are, with their space, their personal photos and visual things. But here there is no grounding of context, and anyone can be anywhere in this space" – ***LT***

"I think also don't underestimate the mental shift you make; the physical environment does actually change how you think and how you do your job." – ***PJ***

Interestingly, the above participants alluded to the influential role that the physical space and artefacts have on their working environment.

The open-plan nature of the work environment provides employees with a shared physical context and the same physical artefacts in the various workspaces within it. More specifically, "kanban" or project boards are physical artefacts that participants described as being used to carry-out collaborative activities such as brainstorming and planning. Participants reported that physical objects such as these can facilitate communication between team members. Bechky (2003) notes that collaborative physical artefacts can also act as boundary objects. These are objects which are understood in a variety of ways (Carlile,

2002). Further to this, Carlile (2004) observes that they assist in the transfer, translation, and transformation of knowledge. The data (below) show that participants felt that artefacts, and the space in which they were located, were significantly and practically involved in work practices.

*"We do, we have a physical kanban board that we use, and we know we wouldn't use the digital one. We also have a weekly team meeting where we bring up things that might not be suitable for the couch environment". -**SS***

*"It is interesting to me because those tools are very useful, but I actually think that we have IT tools. In a way people are choosing practical tools because of the social benefits of doing it. There are actually IT tools such as online kanban boards." - **SR***

By extending the notion of boundary objects, which was first proposed by (Champenois & Etzkowitz, 2018), I wish to draw attention to participants' sense that their workplace offered boundary spaces that brought people together with different objectives. Such spaces become meaningful and incorporated into everyday work practices. Participants acknowledged the kitchen space operated in this way, by allowing people to engage in a variety of informal conversations with colleagues.

*"The kitchenettes, people are waiting for coffee as the machine is slow. Conversation is always occurring in the kitchen, like a watering hole that is used for a catch up." – **BK***

*"The coffee machine is always a hot place to meet. You do consciously go out of your way to meet people more." – **SD***

*"When I am getting a coffee or something that I will talk to someone." – **HL***

Figure 5: Small kitchenette space on level one of the offices. N.B these are preapproved photos with consent provided from all participants featured.

The kitchens are small shared, boundary spaces that encourage the intersection of social worlds. Many of the participants highlighted the kitchen as a space where they spoke informally with colleagues, mentioning that they had made a connection when in this space with a colleague and identified mutual interests. There is one small kitchen on the ground floor and another on level one, while on level two there is a large kitchen that is fully equipped with food preparation facilities.

4.2.2 Technology

Technology solutions are a component of the physical context and are regarded as a necessity for communication in a contemporary work environment. Several of the participants interviewed considered that technology had a large impact on how they are able to communicate and utilise the contemporary office space and, in particular, how easily they could work in a flexible manner and contact colleagues.

The Hub, which is an intranet portal, along with Skype for Business software and Slack Instant Messenger technology, enable employees to connect, collaborate and share with their colleagues across the organisation. The Hub is the official organisational updates platform, where approved internal policies, regulations, internal services, and staff notices are uploaded. Skype for Business, Zoom and Slack Instant Messenger are online communication platforms. Skype for Business and Zoom allow employees to invite colleagues from across the organisation and external contacts to real time virtual meetings, with voice, video, and document sharing. Skype for Business also has the capacity, along with Slack, to initiate instant conversations with colleagues.

All participants reported that they were issued a cell phone and laptop to create an integrated, wireless, and flexible technology capability. This technology, along with a paper-intelligent project completed prior to moving into the space, encourages lean and flexible work practices which allow participants the freedom to work remotely, including at home, other business sites, and anywhere in their own building.

Every participant praised the improved quality of technology available since coming into the new building, noting that without this improved capability, it would be difficult for them to

utilise all aspects of the space. This reveals how new technology was experienced by these workers as instituting different relationships to their workspace in the new building and is one of the significant findings of this study. The data suggested a tight coupling between technology and space in the way the workers reported experiencing the sociomaterial dimension of work. The following are typical of comments made in this regard.

"The technology here is really good as you can just dock and share things in the meeting rooms." - ***SP***

"Using technology a lot more in the new space. It's savvy and I think it is great." – ***BK***

"So, we are probably more reliant on technology than we realise, because when it's not working, meeting rooms can be hard to work in and you really notice." - ***DS***

"Even just keeping up with my own team, as I said before, you'd be sitting in the same spot so you could just talk to each other. Now you are just relying on technology to connect you for a start. It's not like I don't talk to people face to face, but you don't know where they are so you have to use technology to find them for a start. "– ***GC***

Although participants agreed that the improved technology allows for increased flexibility, they were sensitive to the consequences of this. They can now work remotely at all hours and this raises the issue of achieving a sustainable work-life balance.

"I think that sometimes I am guilty of working from home too often, like on a Sunday. So the flexibility is really good but it makes it so easy to do work. I find that sometimes I will do a full day of work and then go home and do more. I do try not to though." - ***SS***

"I think it has made it better for communication and using technology with off-site staff, so they are probably better able to attend the meetings and to interact with us." - ***SR***

Overall, employees suggested that they did have access to technologies that allow them to use the space effectively. As mentioned in the methodology chapter, the researcher travelled to the organisation on two separate occasions, to complete the interviews. During these visits, there was the opportunity between interviews for the researcher to take a comprehensive tour around the building and observe employees at work in the various spaces. As a result, there was a significant amount of informal ethnography carried out. Through this process, the researcher observed the portable nature of the workplace devices, with many employees carrying their laptops to meetings. Another observation related to the nature of the

technology available to employees within the meeting spaces. The technology provided employees with the capability to work collaboratively with others, both internally and externally. These informal observations provided further data for the researcher and assisted the analysis by substantiating some of the comments made during the interviews.

4.3 Presence at Work

The theme titled 'Presence at Work' contains the data on the presence, co-presence and absence of participants in the workspaces and includes data addressing consideration of factors such as noise level, behaviours, habits, and privacy. The data highlight how workers in the workspaces could easily see, hear, smell, and interact with their colleagues.

4.3.1 Presence

How employees manage presence in the workspaces was experienced as an important form of communication in an open-plan work environment. Two participants stated that they purposefully choose to sit in busy areas as a way of connecting with people face-to face. Interestingly, this behaviour was valuable to the participants' work as they benefited from these interactions with their colleagues.

"I did have a phase where I went and sat at the kitchen every day. I just really liked sitting there because you can hear people come in and talking about all of their different things that they have going on." – ***SS***

"I try to have a practice of making a conscious decision to sit in a place where there is really high traffic, near a kitchen or something where I know people will see me. Then, because I am an internal service provider, you do get a lot of interruptions from a lot of different people. I am also happier to be interrupted now I have kind of made some space." – ***GC***

Additionally, the territorial nature of presence was a prevailing theme that emerged from the interviews, with one participant stating that due to the quantity of their work equipment, they were able to secure a desk for a whole day.

"I find that people don't tend to move my stuff because it is covered in paper"- ***MI***

Since relocating to the new premises, there have been numerous attempts to capture the real-time movements of people within the spaces. For example, one team has carried out several small research projects to record the present and absent timeframes in workspaces. These

results are displayed in Table 3. One of these studies was completed in August 2019 and supplied to the researcher to demonstrate that overall, occupation rate of ergonomic workstations on the ground floor and level one had only slightly increased since the previous utilisation survey from an average of 58.4% to 61.2% over the 9am to 2pm time frame. However, the percentage of vacant desks had decreased from 15.7% to 3.7%, demonstrating a 76% percentage change.

Table 3: Average Utilisation for each Category across the 9am to 2pm time slot

	Nov-17	Aug-19	Percentage point change
Occupied	58.4%	61.2%	5%
SOL<=1	16.8%	23.5%	40%
SOL<=2	5.8%	8.3%	42%
SOL<=3	2.4%	2.3%	-5%
SOL>=4	0.9%	1.0%	21%
Vacant	15.7%	3.7%	-76%

4.3.2 Co-presence

Co-presence is used in this study to code data on behaviours, smells, noises, emotions and interactions that individuals reported experiencing when in open workspaces with others (co-present). Participants suggested that they were conscious of their behaviour while working in the shared open-plan spaces.

"I am a conversational thinker, so this building actually helps that. It might be annoying for others, but it works for my personality." – ***DS***

There were some issues raised by participants which could be considered typical of open work environments, such as noise level, lack of privacy and others' behaviour.

"I like being on the edge of rows and prefer when my screen is somewhat private." – ***HL***

"It is frustrating because a lot of people don't follow those etiquettes. So, when you choose to sit in a high focus space and the person sitting next to you is talking, it is frustrating." – ***GC***

4.3.3 Absence

The other side of presence is absence (lack of presence). Not only did workers report strategically managing their presence in the workspaces, but also their absence. Many

participants reported that they prefer to remove themselves from the open-plan areas as a way of minimising distractions and interruptions. Furthermore, when completing particularly challenging or reflective work, if there is not enough desk space, or a preferred space is occupied, participants reported that in these instances they tend to go home to work somewhere more suitable.

"I do work from home when I want to be left alone. But I don't like working from home as I find it very anti-social." – ***MI***

"*If I really need to work and haven't got anywhere to sit then I will go home" -* ***MI***

Although most participants said that they prefer to come in to work, the reasons for this were varied and reflected their own personal preferences and the nature of their work.

"I do have the flexibility to work from home if I like, but I prefer the interaction with others, so I don't often work at home." - ***HE***

"I don't tend to work from home really, as the nature of my role and there only being one of me, I could really do my job anywhere as it's giving advice and support." ***-PJ***

Nine of the fourteen participants specifically mentioned that because they had the flexibility to do so, they will come in early when it is quiet, to complete work with minimal distractions, or to ensure that they can secure a preferred seat for the day.

"I used to start later, [but] I found that starting earlier is a key to being able to get a seat. On a Monday if you were to come in at 9am, you can't find a desk, at least the proper ones that I prefer." - ***SJ***

"I always come in early so I can sit at a desk with two screens." - ***MI***

"I start about 6am so that I can have a couple of hours with no one else around, and that's probably because the space does allow people to come and talk to you a lot." – ***PJ***

"I start really early and usually reserve a spot." - ***HL***

The above intentional choices regarding co-presence, presence and absence shape communication interactions, as they act as signals to colleagues in terms of approachability. These findings highlight how the workers experienced the physical work environment as both connected to, and an influence on, their choices of presence, co-presence and absence.

4.4 Social Context

The social context theme refers to the participants' processes when interacting with their colleagues. This section presents findings on the participants' social orientation, reviewing how this influences their communication behaviour and experiences when communicating within the contemporary work environment.

4.4.1. Social Orientation

Social orientation is a term that recognises there is a continuum of social preferences, capturing the range of individuals' preferred levels of socialising. Participants who self-identified as less sociable or introverted, when working alongside extroverted colleagues, often found some spaces too noisy or distracting, particularly when trying to complete focused work. Some even suggested that when they need to concentrate without interruption, then they will work from home. Another concern raised by a participant who identified as introverted was the potential difficulty of making meaningful connections both with their team, and others, in the flexible workspace.

"One thing I do find hard is sitting at the space with them, as they tend to talk a lot so it can be hard to focus. So that is why I often move away and then come and go." – ***HL****.*

"I tend to work from the quiet spaces when I am carrying out work that is challenging or I need to concentrate" – ***NB***

"I am probably someone who is quite shy also so I was a little nervous as to how I would make friends. It was the social aspect I was worried about coming into this environment." - ***HE***

However, most participants identified as extroverted or sociable and therefore were likely to seek to interact with their colleagues. Even so, many of these people did recognise the difficulties that may confront an introverted colleague in the new workplace.

"Possibly more extroverted personalities engage more deeply. Again, you don't feel obliged to interact in high focus and semi focus areas". – ***LT***

"If you are an introvert I think it would be really hard because it would be lonely. But I think only if you were introverted and new, as opposed to being introverted and coming from the old office as you have your own team". - ***SJ***

"A few of my team have said that the building is designed for extroverts more and people who like interacting, whereas people who don't have found it hard to find that quiet thinking space." - ***DS***

One of benefits associated with activity-based design models is that they generate opportunities for employees to experience encounters with a broader range of new people. When asked directly about their interactions with others, participants commented on the increase in both formal and informal social interactions that the space encourages.

"I really like it. I feel like I meet a lot of people. I will go to lunch and to the coffee machine and see someone new, but people are very welcoming." – ***HL***

"For me it's great. I don't work with the same people all the time. I am working with different people so I really like how you can go and sit with others." – ***DS***

"I know faces that I never did before, even just from sharing a day in a collaborative space." - ***BK***

Although some participants mentioned that they felt a level of discomfort interrupting someone next to them, the interview data suggest that these encounters, which broadened their network, generally occurred in break spaces such as in the kitchen and tended to be superficial in nature.

"I probably wouldn't just stop randomly and talk to someone if they are at a desk. It's definitely the kitchen where you are not focussing on something." – ***SS***

"If you do sit in a high or semi-focus area when you sit down you won't talk and interrupt people you don't really know." - ***LT***

"I talk to more people but on a superficial level". – ***SJ***

"Now there is a lot more casual relationships with people, whereby you know who they are and you say hello. More superficial but some of them turn into a real relationship after 3-4 years. Some of it is just pleasantries. You know who they are, but you really don't have much in common with them because you are busy." - ***SR***

These comments suggest that being co-located in shared spaces did not necessarily allow participants to develop relationships with people that they would not interact with in a non-shared space, such as a traditionally designed office. These findings on the social context emphasise how the physical work environment influences social interaction while at work. Furthermore, assessing communication in relation to physical space highlights the intrinsic relationship between physical materials and social relationships.

Overall, the physical, social and presence context findings reveal that each of these factors were experienced as shaping work practices and behaviours, specifically communication. In conjunction with the three forms of context discussed above, there are position representations, socially indexed self-representation, and etiquette expectations of individuals that influence work communication practices and behaviour. The next section of this chapter analyses the findings in relation to the representation themes.

4.5 Position Representation

The theme 'position representation' was used to code data referring to an individual's understanding regarding the main functions, key performance indicators (KPIs), and key stakeholders or interactions of their role. Within the researched organisation, there is a broad range of occupations, from highly technical roles such as engineers to people-centric positions such as support staff, personal assistants and call centre operators.

From the interviews, it is noted that participants who have consultancy, people-centric or advisory roles expressed positivity towards the workspace. The high level of interaction associated with these positions was associated with positive opinions about the workspace improving their ability to meet and work with a broader range of colleagues. The following is a representative selection of the responses from these participants.

"By virtue of the nature of this work and my work in HR, where you are obviously there for people, I have always been quite present at work." – ***GC***

"I am lucky as I am in meetings all day every day, so I am building those connections and talking to people in those meetings. However, if you don't require regular interaction in your role, then you could sit there and not talk to anybody for a while." - ***LT***

*"For my team's roles, we need to have relationships across the organisation and we need to influence and network, so for us it works really well because it allows us to just bump into people and see people." – **SP***

*"The main way I have formed relationships is through work related things, like meetings and then with events, spending days with people. Even just emailing and posting on the hub, people feel like they know me." -**HL***

In contrast, participants without the need to pursue intra-organisational relationships or connections suggested that they were less likely to seek out interactions and experienced few opportunities to communicate with colleagues, especially those in their own team. Participants with a high degree of autonomy in their position appeared to have a positive perception of the space because they did not feel constrained by the need to find a space to interact with others.

*"As long as I have my laptop and a phone I can really work from anywhere" - **PJ***

*"I have a very small team myself, and my work doesn't rely on other people particularly, so I don't feel the need to be drawn into a group of people. I can work anywhere" - **GC***

Some of the participants interviewed suggested that they did not have the need to utilise the workspaces the same way as others, as they tended to be in multiple meetings most days.

Employees who experienced less position autonomy or had specific workspace requirements, tended to work from similar desks or spaces most days if they possibly could. If they couldn't find suitable seating this was experienced as a constraint on their ability to work. For example:

*"I tend not to sit outside of this area. Even to the point where if I come in later and I can't find a seat, I will prop my laptop up and wait for a seat."- **FT***

*"I think that the different areas of working don't work for me, as I can only use the one kind. If I do sit in high focus it is because it's the only one available and I need two screens." - **MI***

Other than the sales team and call centre, only a support function team has assigned workstations. This was considered reasonable. As raised in two of the interviews, when a team is responsible for a support function, there is a level of necessity and functionality requiring them to be visible in the same location.

4.5.1 Career Stage

Another significant finding was that participants who suggested that meeting new people in the building allows them to develop their professional networks have a greater tendency to communicate with others. The data suggested a connection between the tendency to communicate with others and their career stage.

This was confirmed when the participants were asked what opportunities the space has created. Two of them specifically stated that a benefit of the space was the opportunities it allowed for them to communicate with others.

"Being around and hearing different conversations helps you to pick up on different language and being more aware of what is going on in the business." – ***HE***

"Definitely meeting people in the business who can help you in any way. Just nice social conversations." - ***HL***

In contrast, participants who indicated that they have already established connections reported that they have a reduced the tendency to communicate with others. The reasoning for this was based on a variety of factors such as workload, workflows, and preferences.

"I do (feel comfortable approaching others) but it doesn't help me with my work, so I tend not to." – ***MI***

"I can see that for other departments it might be great to work like that but for us we have never really had too much interaction with the rest of the organisation. So, we are getting a bit lost in here." - ***FT***

"I think there is a benefit in being aware of the rest of the company, but it's small in terms of my work and my teams work. We are very focused and some of the other departments have nothing to do with our jobs. We would probably rather focus on what we are doing." - ***SR***

These findings suggest that, due to the nature of their positions, some participants prefer not to communicate with or interact with others outside their department, as they do not see the value in forming relationships with the greater organisation. However, they do highly value interaction with others from their own department. They say that unfortunately, when operating on an activity-based working model, they are discouraged from continuously working near the same people from their own department.

4.5.2 Teams

The findings suggest that participants who associated strongly and worked closely with their teams noted that they miss the opportunity to discuss occurrences in an informal or even spontaneous manner. For example:

*"If we were sitting in close vicinity to each other, not that we all eavesdrop, but when you hear a word and it makes your ears prick up and you know that you have something of value to add, then you can chip in with your value-add. Or, you wait for that to finish and then you can talk to your team member if you have some history or other knowledge about a situation."- **LT***

*"Being a support role, it's helpful to sit by your team and listen to their conversations so you gather an understanding of what is going on. This helps you to anticipate things. But because you don't overhear these conversations the same, you have to be very transparent and email people, making sure that everyone knows what's going on. That is the hardest part." – **SJ***

*"I have noticed that here, our team shares more than previous places I have been, because we need to, and as we expose the whole team to a dilemma, everyone has a chance to contribute. I think this facilitates the learning for our junior members." - **SP***

These comments indicate that participants value the support and regular conversations with their teams, discussing events in real-time and gathering multiple opinions. To facilitate team connections, five of the seven managers who were interviewed suggested that because of the contemporary space, they held more meetings to facilitate conversations and collaboration.

*"As a by-product of ABW, we have a standing meeting at 3pm every Friday afternoon. We don't book a space; we use the create spaces or a nice area. So, I have this and another on either side of the weekend to facilitate the cross-weekend and informal conversations." – **LT***

*"We also have two team meetings a week. I meet one-on-one with each of my team members once a week for an hour each and then we also have two team meetings a week, as well as the 3pm daily gatherings."- **SP***

"So that is one of the things that I have noticed, we constantly have meetings and catch ups to make sure people are in the loop and aware of what's happening." **DS**

Overall, participants suggested that their team had developed communication norms. These emerged when the team members had shared understandings and arrangements around their preferred methods for communication and collaboration. Apart from the above formal and set meetings, some teams had a space where often the team could meet informally. One participant identified their team's informal space as a couch area in one corner of the workplace. It is evident that contact with others, particularly for those in heterogeneous teams, is vital to the completion of work.

The findings support the notion that the space has fostered more conscious information sharing, as staff do not know where their colleagues are located from day-to-day. The above quotes illustrate how the physical space has influenced and changed the communication for participants. Instead of relying on chance encounters for information sharing, there are deliberate times and meetings made to ensure that information is being passed to the correct individuals.

4.5.3 Selecting Location of workplace

The participants alluded to the fact that they must choose the location of their workplace each day, as is the intention of an activity-based working model. The respondents' motivations were based upon two considerations: Firstly, they considered the location of their colleagues and secondly, they considered where their locker was located. Both influenced where they chose to sit.

"I like the first floor because most of my team sit there. My locker is up there so it is convenient." – ***SP***

"My favourite area is this half of the first floor. My locker is located up here and I use that to store my safety gear." - ***FT***

*"I was part of a feedback group and we said that we thought of the idea of having a neighbourhood where you could sit in close proximity to your own people, but with hot desks, would be really helpful. That is not what has been set up here formally. What has tended to happen is some teams come in early and congregate." -****SR***

Secondly, participants suggested that they tended to choose a workspace away from busy or noisy areas, such as the call centre, sales staff as the noise was distracting. Consequently, they had a preferred area or floor that was best suited to their environmental requirements. Interestingly, four participants admitted that they rarely or never worked at another workplace, but had their preferred or own fixed workplace.

"Sometimes I find that I get too hot, so I go downstairs." - ***DS***

"Yes, I don't move around very often. I start at about 6:45am so I could sit wherever I like but I usually sit in the same spot." – ***SJ***

"I do often sit at the same desk as it is available when I come in and then people can find me." - ***MI***

Due to personal circumstances, eight of the fifteen respondents had the option to select a workspace early in the morning and tended not to move from this place for the rest of the day. It was mentioned that starting early allowed individuals to choose from a larger selection of workspaces as there were less people in the office. Clearly, they found that it was a disadvantage to arrive later as often the more favourable spots were occupied.

4.6 Socially Indexed Self-Representation

All participants had their respective person representations, encompassing information about their preferences, knowledge, expectations of others, values, and beliefs, which were revealed when each participant was asked about their own personal experience of working in this environment. This question received a variety of responses:

"I'm an introvert by nature, but I do like to see the people around me and feel part of the larger organisation." – ***BK***

*"I am quite an open person so not a great example of a new person that struggled in this space. I was willing and was a little frustrated at the start before I figured out a good routine." -****SS***

*"I do really like change, whereas others don't, so just different personalities. I think it is probably worthwhile knowing the personalities of the teams before you do the move." –****DS***

There were varying degrees of knowledge about the colleagues who they tended to sit close to. Some were familiar with the groups they sat beside and had picked up on their habits. In

contrast, participants said that in some instances, they knew very little about colleagues who tended to sit close to them on a regular basis. Given the size of the organisation, there are multiple departments with several teams. As a result of recent growth, there are many new employees and teams in the building. Employees from different departments did not develop formal working relationships with one another and therefore it was necessary to get to know each other. In some instances, participants mentioned that they felt uncomfortable approaching people who they did not know.

"I wouldn't just go and start talking to someone, but usually if I hear something I will join in." - ***HL***

"I find it hard to interact just sitting next to someone because I don't want to distract them as we are still in an office environment." – ***HE***

4.7 Etiquette Expectations

The etiquette expectations theme encompasses information on the type of behaviour that participants considered to be acceptable and appropriate within the work environment. In line with an activity-based working model, the space researched had several different labelled areas - high focus, semi-focus, and unmarked, which was open to any activity.

Participants who applied focused etiquette expectations and identified as being aware of the protocols associated with certain spaces, indicated that they attempted to abide by guidelines to avoid distracting others.

"If I am in that space and my phone rings, I just step away and take that call, or if someone comes and talks to me then I get up and just walk away, because there are many places you can just go and sit down with someone and have a chat." ***GC***

"We tend to have conversations at desks, so I tend not to sit in the high focus areas. It is a bit nosier but then you can have those conversations and you aren't distracting others." - ***FT***

The researcher found that the fluidity and freedom that the spaces offer can sometimes have a negative impact as it can restrict others from securing their preferred workspace.

"At the start people abided by the space labels. Now with the lack of space, people just grab whatever you can find and then try to remember where you are." – ***BK***

*"The stuff that I read is you can save some desks but you still need to allow enough desks so people can work in space they prefer." – **FT***

4.7.1 Trust

The notion of trust was raised at several times during the interviews, as the workspace promotes flexibility and a mature working model that relies on trust. This model encourages employees to work in a space according to their tasks. This can mean working remotely from their team and manager. Participants suggested that the nature of the space allowed them to feel more trusted by their superior.

*"I also like having the responsibility where my manager trusts that I am going to get my work done and manage my time effectively. I like being empowered to have that freedom. It makes me feel more valuable as an employee." - **HE***

*"I didn't feel trusted to go and do things (at previous work place), whereas here, we don't always run into our manager every day. Sometimes she will come and sit at the couch with us but is never like "oh I didn't see you at a desk today, are you doing your work?" kind of thing. It gives us a lot more autonomy I think." – **SS***

From a manager's perspective, the flexibility that the space encourages has required a change to the practice of managing their team. It should be noted that the researcher recognises that some of the trust theme that emerged is separate from the space. It can be attributed to the working relationships of the employees. All seven individuals interviewed who had direct reports stated that they trust their teams to complete the work, regardless of the workspace. However, three of seven identified that the space and flexibility add a level of complexity to their role of managing outputs.

*"Who knows when you turn up and when you go home? There has to be a level of trust. As soon as output doesn't equate to a level of a 40-hour week then you have to ask some questions." – **LT***

*"Because of the way we work, your managers have to become very trusting of you, because they don't know where you are sitting every day. They don't know necessarily what you are doing each day, you have a lot of autonomy." – **JS***

"This environment helps the team-leaders as they can sit amongst staff and they even sit together too because they feel as if they can bounce (ideas) off each other." ***-PJ***

The data coded as position representation, self- representation, and etiquette expectation discussed above, reveal personal thoughts and perceptions of themselves and others. As such, these themes are part of participants' cognition about the human element in workplace communication.

4.8 Interaction between Context and Representation

The section above discussed the themes, addressing contexts and representations in isolation. This next section will explore them in conjunction with each other, to show how each is embedded within the other.

4.8.1 Physical Context and Position Representation

All individuals interviewed worked in the same large, open-plan office environment where they were given the choice of workspace each day, as relatively few had assigned workstations.

Those who worked in a position which required them to regularly communicate with others, both informally and formally, reported that they often change their physical location. For example, they may sit in a busy area to purposefully interact with colleagues as they go past, or they utilise the meeting, chat, and collaboration spaces throughout the building to communicate with others. Additionally, when participants had a need to interact as a result of their job, they tended place high value on the interactions with their colleagues. Consequently, they have a greater tendency to engage with others on a regular basis and use the workspace for communicating with others.

In contrast, participants with a focused position representation found that they were not able to utilise the physical space, as they required a specific desk set-up to carry out their work. Therefore, they reported having a socially situated sense of the value of a fit-for-purpose space that allowed them to focus individually on work, with minimal distractions. These participants stated that they tended not to communicate in depth or at length with colleagues who had different lines of work to their own. The reason for this was that they did not see the value in forming a relationship, particularly when they were working to timeframes. This results in the workspaces being used for private work.

Furthermore, a common theme when interviewing employees who performed support roles, such as internal information technology care, was the necessity of a fixed location. The rationale behind this perspective was to ensure that colleagues could easily locate them when they required support. Given this requirement, one internal support function was permitted a fixed desk space, where they were permanently located.

This finding suggests that although the working model encourages flexibility, there are holders of some positions who prefer a fixed physical location to allow them to effectively carry out their tasks. The above section has highlighted that although working in the same physical work environment, employees have many different requirements in terms of performing the tasks associated with their own positions. Thus, employers in conjunction with architects, have a variety of position-related requirements to consider when designing a workspace.

4.8.2 Social Context and Position Representation

The interplay between the social context and position representation contributes to the socially situated sensemaking needed to understand workflows, timelines, and need for interaction.

Six of the participants specifically mentioned that they would value being able to work in close proximity to those doing similar work such as their fellow team and department members, as this would allow them to easily communicate and connect when necessary throughout the day. This was commonly referred to as forming neighbourhoods, an approach whereby those who work on similar tasks or projects had an assigned seating area.

A prominent theme that emerged from the analysis of the data concerned the difficulty in finding and communicating with colleagues when participants were working in an area shared by staff working on different tasks. It was difficult because they could not easily locate their team to share information.

"Now we have to be a bit more thoughtful as to how we tell people, or when we include people in the loop, because you just have to really think about that because the communication isn't so natural, you have to make sure you tell people now. So, you have to specifically think of that side of it." – ***DS***

"It does create some headaches as they (my team) have had to work harder in terms of how they share information So working in a space like this, they use confluents a lot so they all can see it. So, this means we have had to be smarter with technology as you can't keep things all in your own head." - ***PJ***

Those who are required to interact are more likely to meet new people in the organisation. Participants identified that the opportunity to meet people often arose due to frequent meetings associated with their position and line of work. However, those who identified with a different and individual-focused position representation suggested that they did not have the same opportunities to interact with colleagues who were not part of their team or department.

4.8.3 Socially Indexed Self-Representation and Presence at work

Data gathered from the interviews suggest that an individual's person representation, such as their preferences and values, influence the presence context, their presence and body language. The interaction between the representation and context creates a socially situated sense of confusion about whether to interact with colleagues, due to concern about distracting them.

Participants discussed their perception of the business growth that the organisation has experienced over the past two years, in conjunction with moving to a flexible working model. The consequence of both these changes is that there are many new people in the office and participants suggested that as a result, it was difficult to get to know people on a meaningful or personal level. This perception was organisation wide, but also occurred within broader teams and departments. Although participants could interpret the body language of the colleagues who sat near them, they did not really know these people and said that they viewed it as impolite to approach someone who was working. This implies that there is a lack of understanding around others' emotions, preferences (person representations), and workloads, often displayed through body language (presence context).

Overall, this suggests that workplaces designed as open-plan and ABW could enhance and promote communication when individuals are able to create meaningful connections with each other and understand others' body language, preferences, and values. This would encourage awareness of one another and adjustment of individual behaviour to accommodate others.

4.8.4 Position Representation and Etiquette Expectations

From the data gathered during the interviews, it became evident that the interplay between position representation and interpretation of etiquette can both encourage and hinder communication. Firstly, when employees share an understanding of what is considered appropriate behaviour in a given space, they tend to have an increased ability to empathise and understand their colleagues' interaction requirements. For instance, there were etiquettes in terms of call centre employees and the workspaces essential to their work. The call centre employees require a desk with a phone connection enabled. Given that they are continually responding to phone calls, these individuals have great interaction requirements. Therefore, another colleague who chooses to sit near these individuals is able to understand these needs and respect them.

However, when employees have different sense about the etiquette required in each space, this can result in employees becoming frustrated by distractions. As discussed earlier in this chapter, the organisation attempted to mitigate this by applying signage in zoned areas, for instance indicating those with high-focus and semi-focus with associated etiquettes. However, this was not always effective. For example, because of workspace capacity some staff had to work in high-focus areas. Because they needed to interact with others, they were not able to abide by the etiquette expectations for this zone.

Moreover, participants with highly technical positions tended to have an etiquette interpretation which favoured space for focused work and only intermittently collaborated on complex problems. In contrast, employees who had a people-centric position tended to favour space for collaboration and communication with others. It is evident from such findings that position representation influences space and etiquette requirements and there can be tensions when others do not have the same requirements.

4.9 Other Findings

In addition to the primary themes, there were some additional findings which can be reported on to provide insights for further research with bigger samples. These discoveries are not entirely established, however they are discussed below because more than one participant raised a similar theme during the interviews. Although they are not recognised as the primary findings, they can be considered as secondary themes or emerging topics.

4.9.1 Learning Through Osmosis

As a result of being physically dispersed so they were away from their teams and broader department groups, two participants directly indicated that they experienced a significant reduction in the ability to learn through osmosis. Essentially, they suggested that the natural learning that occurs through overhearing and being part of conversations within the work environment was not transpiring in the new workplace.

"*That was something that came up with one team who said they all used to learn from one another's mistakes or learnings because they were all in the group, so one person would share, instead of each person having to make the mistakes themselves." –* ***DS***

"The interaction by chance and learning by osmosis - that is completely out the window for our department." – ***FT***

"Sitting together as a team, and the ability for new people to learn quickly who the team was and what they were doing, and to feel settled in. So, I had a new staff member who started a few days ago. We have had to make a real effort to arrange regular meetings and sit together, even though I don't get in early enough." – ***LT***

In the section on the teams theme earlier in this chapter, there were examples of planned collaboration periods set aside to compensate for the reduction in casual team conversation in a workspace. The researcher suggests that another way to overcome this, while still abiding by the activity-based working model etiquette, would be to arrange for a small number of team members to sit near each other on a rostered basis. This could ensure that there is still cross-team casual communication throughout some workdays, however the work location could vary depending on activity.

4.9.2 Need for Collaboration and Support

A theme that emerged as important for the participants was the need for collaboration and support for new employees entering an activity-based working model environment. This reflects participants' concern that there is a potential for new employees to experience a sense of isolation when they first begin task-based working in an office-less workplace, particularly if they have not experienced a similar work model.

During the interviews, a "buddy system" was mentioned as a way to minimise the risk of isolation and encourage the forming of working relationships. Some departments were

already utilising this as part of their induction for new team members. Below are responses from two participants in terms of providing advice for newcomers.

"The buddy system was really important to show you how things are done in this environment and I think I would have felt very different without the buddy." – ***HE***

"I would tell them to move around desks but stay on one floor to form some casual relationships at first." – ***HL***

These interview excerpts suggest that although an activity-based working model was considered to encourage employees to be flexible with their work locations, workers sense was that initially it could be beneficial for them to work in close proximity to their team in order to develop a network.

4.10 Summary

The findings presented in this chapter provide valuable insights into the complex and interrelated themes that participants took into account when relating their communication experiences in their office-less workplace. These should be considered by managers, change consultants and architects when making changes to the physical work environment, even though these findings support the findings of Elsbach and Pratt (2007) who suggest that there is no single physical environment that will consistently produce the desired flexibility, efficiency, and cost effectiveness, therefore there will be trade-offs with many physical arrangements. The range of themes that this research suggests is shaping how the workers experience their office-free work environment is displayed in Table 4 below, along with the adaptive practices used to address them.

When conducting the interviews, it became evident that there are varying opinions in terms of participants' preferred work environments. Each participant's responses were influenced by their relationship with time, supporting the notion of temporality, whereby they were anticipating the future for the organisation, and considering previous experiences. For example, some were expecting continued organisational growth and bearing in mind their previous work environments.

Table 4: Adaptive Communication

Primary-themes	**Related concepts**	**Adaptive communication practices**	**Examples from participants accounts and observations**	**Summary**
Physical context	Material objects	• Physical objects such as kanban boards, tables and chairs and physical spaces are used as communication tools	• Individual's belongings are used to indicate that a space is in use. (i.e., a jacket over a chair shows the space is in use). • The kitchenettes act as boundary spaces for employees from different sections to meet informally	• The physical objects within the workspace can both facilitate and hinder the communication of employees
	Technology	• Technology-based communication, primarily laptops and cell phones, is the primary mode of communication internally and externally • Working remotely doesn't disrupt communication – just encourages more of the same	• Laptops and cell phones primary devices for communicating when working. Skype for Business, Zoom, Slack, and The Hub are the primary platforms/software.	• A tension exists between providing flexibility with regard to work location and institutionalizing a lean communication environment
Social context	Social Orientation	• Work location decisions appeared to be linked to social orientation. Extroverted employees tended to choose to sit in collaboration or non-assigned spaces	• Employees stated that they developed many casual or superficial relationships, suggesting this is the result of frequently using shared space.	• Designers/managers need to consider whether spaces benefit staff with certain social orientations • One type of space may not fit all

Presence at Work	Presence	• Presence in a particular space can signal the type of task being undertaken if the worker has managed to secure the appropriate workspace in the competitive 'space market'	• Employees reported starting work earlier to ensure they secured a preferred desk	• Time spent in the workplace and space availability are coupled • An audit of the use of different workspaces would help ensure sufficient availability and allow managers to influence the level of presence at work
	Co-presence	• Workers moderated their behaviour as they were conscious of how communication levels impacted on others • When companionship or interaction were sought particular spaces were frequented	• Workers reported modulating voice when others were in their chosen workspace. • Workers reported sitting in busy, high-traffic spaces, such as kitchens or walkways, to see people	• Rather than encouraging communication, the open-plan workspaces may constrain communication • Designers/managers need to ensure an appropriate balance between quiet and interactive workspaces • Ongoing monitoring of absence and presence in workspaces is indicated
	Absence	• Ability/license to work remotely means workers' homes and cars become extensions of the workspace and are used to compensate for the limitations of the workspace	• Employees reported working from home or remotely if they need to concentrate and not be distracted • Workspaces are seen as places for doing interactive, face-to-face tasks	• An open-plan workplace can foster a blurring of work and private life because workers use home spaces to avoid distractions encountered in open-plan workspaces
Socially indexed self-representation	Preferences	• Employees adapt their work location and body language to communicate their working preferences • There are preferred spaces to communicate and	• Due to a significant workload, an employee elects to work in a secluded space, such as a hut	• Greater choice of workspace to meet individual needs • Point missing here?

		work in		
Position Representation	Career Stage	• Greater opportunity to connect with the broader organisation and develop a network	• Sitting near different people helps increase knowledge of the organisation	• Employees use the ABW space to develop organisational connections
	Teams	• Held more meetings and put time aside to consciously share information	• Daily 3pm meetings • Stand-up meetings either side of the weekend to encourage interaction	• Re-think how information is shared between team members • An increase in purposeful and planned collaboration time
	Location of workspace	• Required to communicate on team's work location for the day if collaboration is necessary	• Employees will save spots for colleagues or agree on a preferred space to locate themselves	• The formation of 'neighbourhoods' allowing employees to choose to sit near their team daily
Etiquette Expectations	Trust	• The level of trust between a manager and direct report is increased due to the increased space between them	• An employee may not physically see their manager for a few days	• Reduction in micro-managing tendencies • A mature workforce who are self-managing

Chapter 5: Discussion

5.1 Introduction

This study explored how employees understood their communication in a contemporary office-free workplace. The analysis in Chapter 4 revealed that there were three key context factors: physical context, presence at work, and social context, together with three key representational factors: socially indexed self-representation, position representation and etiquette expectations, that influence how the employees comprehended their communication experiences. This chapter describes the findings of the second-level coding. This coding led the researcher to identify that the themes of physical context, presence at work and social context can be combined under overarching concept of 'sociomaterial effects'. This concept refers to how the social dynamics which take place are influenced by the physical environment in which they occur. The remaining themes of socially indexed self-representation, position representation and etiquette expectations combined under the overarching concept of 'socially situated sensemaking'. These themes recognise how the person or self's values, history and background are accounted for when considering the interaction between the physical and social domains. This chapter discusses these concepts in relation to relevant literature, especially the concepts of sociomateriality (Orlikowski, 2007) and situated cognition (Lave & Wenger, 1991), which are adapted to highlight the concepts which capture the overarching influences on how employees understood their communication experiences in relation to relevant literature. The chapter then presents the entire model that emerged from the analysis and discusses the significance of this model.

5.2 Sociomaterial Effects

Sociomateriality is the study of both space and time, with a particular focus on how humans, spatial arrangements, technology and physical objects are intertwined through language and interactions (Pickering, 1995; De Vaujany et al., 2015). A prominent scholar within this field Orlikowski (2007), describes sociomateriality as the relationship between the social and material, contending that it is "the constitutive entanglement of the social and the material in everyday organisational life" (p. 1438). In addition, Barad (2003) identifies that the notion of constitutive entanglement does not presume fixed entities, proposing instead that they are created through on-going interaction.

The term sociomateriality (Orlikowski, 2007) was borrowed from extant literature to capture the interrelationships of the data in the thematic codes 'physical context', 'presence at work', and 'social context', and elevate these to a higher order category. This key overarching concept of sociomateriality inspired the creation of the term 'sociomaterial effects'. This was created to capture the mutually constitutive nature of the physical and social elements of the work environment, and was a perfect concept to represent the interconnectedness that was evident in the way participants in this study described their communication in their office-free workplace.

Also, Orlikowski (2010) explains the association between the material and the social through the lenses of a relational ontology, which supports that sociomaterial realities are fluid, interconnected and temporary emergent practices that form organisations. The researcher found that the sociomaterial effects such as the physical objects and social interactions described by participants could be momentary, situational, and interrelated. However, although sometimes temporary, the interactions with these effects were responsible for the on-going practice of organising.

5.2.1 Physical Context

The benefits and drawbacks of a wide variety of organisational changes have been extensively covered in the abundant change literature that has been published since the 1970s (Bean & Eisenberg, 2006; Hernes, 2004; Kim & de Dear, 2013; Oldham & Brass, 1979; Oldham 1988; Sundstrom et al, 1982; Sutton & Rafaeli, 1987; Van Marrewijk, 2018). Changing workplace design is one change that has become very topical as firms increasingly

move to open-plan designs, in their quest for efficient and cost-effective workspaces (Engelen et al., 2019).

Technology capability is fundamental to enabling the flexibility an open-plan work environment. The findings highlight that the technology capability of this organisation has significantly improved in conjunction with the move to the ABW model. Thus, the flexibility to work from home and communicate with external contacts through the technology software such as Zoom, is not a direct affordance of ABW. It could be argued that a modern workspace, such as one configured to allow ABW, encourages technology improvements to give workers the flexibility to work in any space, including at home.

Bencherki, (2018) discusses organisational space in terms of the concept 'assemblage', which is a collection of artefacts, individuals, practices, and the interrelationships between them (Venn, 2006; Phillips, 2006). The findings in the study demonstrate how assemblages shape organising practices, for example, the kitchenettes are small communal areas located on each floor, and frequently used by employees as a meeting space. These kitchenettes act as a boundary space - an intersection between the different social worlds that staff inhabit when working - where people come together to satisfy their varying needs for connection, time away from work, and an intimate space to talk. In doing this the kitchenettes provide a sociomaterial example of a boundary object (Carlile, 2002), one that fulfils differing informal communication needs.

Boundary objects (Carlile, 2002) are artefacts which are understood and interpreted in a variety of ways. Benchky (2003) found that collaborative physical artefacts can act as boundary objects. The findings of this study are consistent with his, as kanban or project boards encouraged and facilitated communication The physical artefact allowed a team to come together both in person and virtually, to communicate their ideas in ways that allowed them to satisfy their particular work goals. Other spaces such as those created by the high-back or semi-circular seating areas created intimate spaces to work collaboratively on common goals. The kanban boards and high-back couches defined assemblages in which task groups communicated to meet diverse and shared goals. These physical artefacts exerted agency – they structured the type of communication that occurred in or around them, and so influenced individuals' and groups' choices of where to communicate.

Cnossen and Bencherki (2018) propose that work practices can shape workspaces and give them meaning. This suggests that practice and materiality mutually constitute each other.

This is demonstrated by an event called a ‘town square’ where employees from all different departments gather to learn and get to know others. The “town-square” meetings tended to occur in the centre of the building and allowed employees to congregate casually and sit side by side on the staircase. The gatherings defined such spaces as the town square and then the spaces in turn attracted such gatherings. This mutual constitutive relation between social practices and materiality defined these spaces in the ‘heart’ of the building, which over time had become infused with a shared sense of belonging to both the human and material dimensions of the organisation.

In the academic literature, there are two main assessments of the relationship between open, flexible work environments and communication. There are scholars who insist that a flexible workspace positively influences communication (Beijer and den Hollander, 2015; Blok et al., 2012; Boutellier et al., 2008). Other scholars suggest that flexible workspaces reduce interaction (e.g., De Croon, Sluiter, Kuijer & Frings-Dresen 2005; Hatch 1987). The findings of this Master’s study suggest that physical spaces and communication engage with each other in a mutually constitutive way. The space in which communication takes place defines the communication, and conversely the communication taking place defines the space. The building changed the way employees communicated, but employees also shaped aspects of the building. The different work spaces and physical artefacts, such as the kitchenettes and their tables, the fittings and appliances, the high-back chairs in the collaboration areas, and the balconies and stand-up desk areas, all offered, and were manipulated to offer, distinct opportunities for both informal and formal communication.

Overall, the theme ‘physical context’ highlights the importance of how the arrangement of material artefacts and spaces affected how participants understood communication. This is reflected in the finding that material objects such as kanban boards and the kitchenette spaces supported differing forms of communication. These material spaces were not neutral and were understood to dictate what sort of communication was and was not appropriate. The data support the findings of Benchky (2003), Cnossen and Bencherki (2018), by suggesting that physical spaces and artefacts provide meaning to work practices.

5.2.2 Presence at work

The findings also demonstrate how the workspace influences the way participants manage their presence, co-presence, and absence behaviour. Mantovani and Riva (1999) define this as

environmental presence which explains how the environment and individuals recognise and respond to one another. The findings reveal how the participants organised their time in and out of the workplace, showing how environmental presence is developed through the relationship between the physical work environment and communicative practice.

Firstly, in terms of presence, although most participants mentioned that they do not regularly switch workspaces, some said that they often choose to sit in high-traffic or busy spaces within the building. The objective of this presence behaviour is to gather inspiration, catch-up with multiple people, or stay motivated. Interestingly, this behaviour was valuable to the participants work. These participants commented on their increased satisfaction with the work environment, as they benefited from the flexibility that the workspaces provided, particularly in terms of their improved ability to craft interactions with colleagues. These findings are contradictory to those of Gorgievski et al. (2010), who found that individuals in ABW environments were less satisfied with the flexible arrangement as there was reduced workplace control, specifically when compared to those who worked in traditional cellular and assigned workspaces.

Secondly, in terms of co-presence, a study by Irving (2016) found that participants were aware of how their behaviour would impact on others in an open workspace. Consistent with this, the findings from this study reveal that participants are very conscious of their behaviour while working in the open-plan spaces. For example, participants mentioned they took care not to sit in designated high-focus work areas if they had to make phone calls.

Lastly, in terms of absence, participants indicated that they work from home, come in early, or work outside of normal office hours on some occasions, if they had focused work to complete. The reasoning for this is that absence from the workspace allowed them to manage distractions and interruptions. Marrewijk and Van den Ende (2018) found that working from home had increased since employees had begun working from an ABW workspace. One consequence of being absent from the workplace, identified in this study, is that absence can influence communication, as employees are not always available for face-to-face interaction. Employees may choose to limit their communication opportunities by being absent from the workspace on a regular basis. These findings suggest that office-free workplaces not only shape the communication which occurs within them, but also has an impact on the amount of communication. The researcher also identifies that an ABW workspace encourages mediated communication, involving devices like computers and cell-phones.

5.2.3 The relationship of the material and social dimensions

Studies of flexible and open-plan work environments are a precursor for research on social organisational behaviours (Elsbach and Pratt, 2007; Hedge, 1982; Seddigh et al., 2015). These disciplines have produced conflicting results about whether flexible, open, and contemporary work environments have a positive or negative influence on social behaviours. Although Hatch (1987) found that open-plan work environments reduce interaction, Boutellier et al. (2008) discovered that open-plan work environments improve communication. This study found that a flexible office-free workplace increases employee interaction with colleagues across the organisation. This conclusion is consistent with those of Blok et al. (2012) and de Been, Beijer and den Hollander (2015), who discovered that ABW improves communication and interaction with a diverse range of colleagues.

The findings from this study also suggest that a distinction should be made between informal and formal communication. Informal communication refers to the casual and non-work related encounters with colleagues which took place in spaces such as the kitchen. Formal communication refers to the interaction that is work-related, and typically occurs in settings such as a meeting rooms, collaboration zones, or at workbenches. Participants reported that both forms of communication where increased in the office-free ABW environment. Informal communication improved in spaces such as the kitchen or shared break spaces, and reportedly broadened participants' organisational networks. These findings are in line with previous studies by De Been et al. (2015) and Marrewijk and Van den Ende (2018), which found that spontaneous encounters were enhanced in open-plan workspaces. However, this Master's research also found that formal communication was improved when, for example, participants were able to sit down next to a colleague and overhear as well as contribute to work related discussions. As a result, they reported learning about different departments and individuals.

The findings around the relationship between materiality and social dimensions in the workspaces highlight that these factors are interdependent. This provides the rational for employing the notion of sociomaterial effects (Orlikowski, 2007) as the heading for one of the two categories that emerged in the second level of coding. Section 5.3 deals with the other category – 'socially situated sensemaking'.

5.3 Socially Situated Sensemaking

Situated sensemaking is a term that is often used, albeit somewhat loosely and variably, in the sensemaking literature. This can be linked to the more theorised concept 'situated cognition' (Lave & Wegner, 1991), a well-known concept in learning theory. Lant and Shapira (2000) define situated cognition theory in organisations as "the interaction of cognitive schemas and organisational context". Schemas are mental thoughts and opinions that are generated through lived experiences. They act as frameworks and allow humans to interpret situations (Walsh, 1995). Contexts are the physical and social settings in which cognition is considered. These settings influence the meaning and behaviour of activities (John, 2006). It is the interaction of schemas and context during the sensemaking process which generates temporary thoughts, also known as situated cognitions (Elsbach, Barr and Hargadon, 2005).

In addition, Semin and Smith (2013) advocate for the study of cognition to be perceived as socially situated, but also considered in the physical context in which it occurs. Situated cognition can be considered as a continual sensemaking process which aims to make meaningful the ongoing stream of experience Weick (1995). Therefore, situated cognition portrays how the sensemaking about communication unfolds in social contexts (i.e., with colleagues and teams) and physical contexts (i.e., a culturally constituted environment such as an organisation).

Weick (2009) describes the process of sensemaking as when individuals extract cues from situations and use these to retrospectively generate plausible sense, which is continually being updated and refined. Also, sensemaking is a process based on plausibility, coherence, reasonableness, invention, and creation, rather than accuracy. Thus, it focusses the researcher's attention on discovering the subjectivity of a "persons socially situated, constantly evolving, retrospective sense of a phenomenon, and most importantly how they create this sense" (Mills, 2010, p. 217), instead of searching for an objective and generalisable version of the phenomenon being researched.

Situated cognition theory (Lave and Wenger, 1991) and sensemaking (Weick, 1995) inspired the development of the second key theme. The themes of 'socially indexed self-representation', 'position representation' and 'etiquette expectations' were combined into a broader category called 'socially-situated sensemaking'. This term attempts to capture how the workers' sense of communication is indexed to the social dynamics. The researcher

acknowledges that all sensemaking is social however, socially-situated sensemaking attempts to capture the notion that the nature of the social dynamics between the workers has agency in the sensemaking about the communication that occurs in the workplace, in the same way that situated cognition is indexed to a community of practice.

5.3.1 Socially indexed self-representation

The data from each participant show that their work environment experiences, sociability preferences in a workplace, values, and beliefs related to their ideal work environment, influence their response to a workspace. Research in the organisational studies and workspace disciplines has tended to review the relationship between experiences and sociability preferences in the workspaces. With many studies drawing conclusions on how this relationship impacts satisfaction (e.g., Kim & de Dear, 2013; Oldham & Brass, 1979; Sutton & Rafaeli, 1987).

Research by scholars Kim and de Dear (2013) suggests that individuals can be initially satisfied by the physical space and interactions that an ABW design allows. However, this satisfaction will decrease if minimum needs of noise and privacy are not met. Consistent with those results, this study found a generally positive response towards the contemporary workspace, however some participants suggested that they had preferred locations within the building, such as the ground floor, as it is often a quiet space. They also identified that they avoid working from some areas that are generally loud and distracting, such as spaces where people take phone calls. Additionally, the different temperatures on the floors influence space preferences.

The findings of this research suggest that personal preferences can influence routine behaviours. For example, some participants said that they sit at the same or similar desk most days, despite having the choice to sit in a variety of locations. These routines appear to be deeply entrenched individual norms and suggest a subconscious attachment to the idea of having an assigned desk – a personal workspace that a worker can identify with. These findings are in line with research by Appel-Meulenbroek, Groenen and Janssen (2011) which found that 68% of their respondents never switched workstations on a normal day. This suggests that an organisations' expectations that an ABW design will promote flexibility may not be realised. The researcher contends that there is a mind-set shift required when organisations change workspaces that can take some individuals some time to embrace and accept.

Overall, the analysis of data on socially indexed self-representation revealed the way that workers represented themselves in relation to the social circumstances. The data identify that the social circumstances within the workplace can be complex and highly variable. The obvious implication is that employers need to understand personal preferences and requirements, prior to changing work environment design. Such understanding can be developed through a well-defined and appreciative process employing interviews, focus-groups, or individual surveys to understand preferences of individuals.

5.3.2 Position Representation

The findings of this study support those of Irving (2016) by demonstrating that an individual's understanding of their job (i.e., position representation) shapes their experience of communication in a contemporary workspace. Participants who viewed communication and collaboration with others as central to their position, tended to consider the contemporary workspace as enhancing their ability to communicate and thus complete their tasks. Consequently they spoke highly of the workplace, praising their interactions as a benefit and an opportunity to learn and overhear useful information. However, the participants who indicated that their positions require them to work closely with a team, or on focused task such as a project or confidential work, tended to have a negative opinion of the space. They stated that they experience difficulty in trying to find, communicate, and work with their colleagues. Additionally, they suggested that interruptions and distractions impede their work. They do not benefit from interactions with others as their work has little cross-over with colleagues outside their department.

The findings also suggest that those employees in the earlier stages of their career who could be categorised as willing to learn and grow, were associated with a collaboration-centred attitude that was reflected in their approach to communication. Whereas those who were further along in their career, with existing work relationships, tended to exhibit a negative attitude towards the ABW work environment.

The preferred location of work associated with an individual's understanding of their position also influenced how participants utilised the activity-based working design. Some participants indicated that they struggle to work in a mobile and fluid manner due to their formal position requirements, such as the need to work with two computer screens, specific resources, or groups of people. Therefore, in line with other research findings (e.g., Appel-Meulenbroek et al., 2011; Hoendervanger, De Been, Van Yperen, Mobach & Albers, 2016),

most participants stated that they did not regularly switch workspaces. However, some participants indicated that their position did allow them to actively use different workspaces, such as working from different meeting rooms, stand-up desks and high-back couches.

The findings in terms of information sharing associated with an individual's position demonstrate a shift in conscious information sharing, as people do not know where their colleagues are located each day. These findings highlight the emergence of new work practices, and managers suggest that they have set up regular informal and formal meetings with their teams accordingly. This is to ensure that everyone is provided with a suitable opportunity to hear, understand, and ask questions regarding any information which may have an influence on their line of work. It was mentioned that previously, the meetings may not have been as necessary as there were ample opportunities for individuals to talk informally with one-another, due to the close-proximity seating arrangement of the team. Therefore, information tends to be shared via an email or quick team catch-up so the manager can be confident that the information is dispersed accurately. These findings demonstrate how these communicative practices enable the participants to make sense of the organisation and their individual role within it.

5.3.3 Etiquette Expectations

The experiences that the participants identified are consistent with research by Pepper (2008) who states that employees avoid interacting with their colleagues because they feel guilty about potentially disrupting others.

The work environment contained high-focus, semi-focus, and unmarked work zones, which provided employees with an etiquette guideline on how to behave in certain spaces. A study by Rolfö and Babapour (2017) identified five polices that are crucial to an ABW design. These polices included etiquette on: removing belongings, the use of the same workstation on consecutive days, and interaction and speech guidelines. Similarly, the organisation studied in this research had etiquette guidelines covering each of these behaviours. However, Babapour et al, (2018) and Irving (2016) found that employees could disregard rules or protocols for the work environment when they are enforced from the top down. Consistent with this, participants reported experiencing frustration with others not following etiquette guidelines. However, those who admitted to not following the guidelines on occasion stated that they had a limited choice of workspaces available, resulting in them working in spaces not suited to their task. Moreover, consistent with Laframboise, Nelson and Schmaltz (2006),

the findings of this study suggest that etiquette for behaviour in the work environment is more effective when generated from the 'bottom-up', for example, participants stated that they remind others of appropriate etiquette by asking them to work silently in high-focus areas.

Trust was a theme which emerged under the key theme of etiquette expectations, as an ABW design can modify trust in the relationship between employees and managers. To the researcher's knowledge, there are scant studies focused on trust in activity-based work environments. However, there is research examining the relationship between job control and ABW designs, for example Robertson, Huang, O'Neill and Schleifer (2008), found that employees gave higher ratings of job control in an ABW environment. In line with this, the findings from this study suggest that the mature environment has resulted in some participants experiencing a greater sense of trust from their manager. From a manger's perspective, in an ABW environment the guidance and support for their team is delivered differently when compared to a traditional workspace.

5.4 Interaction between Context and Representation

This study provides empirical support to the knowledge that communication is a form of socially situated cognition emerging from the interaction between representations of self and position, etiquette expectations, physical context, presence at work, and social context. Specifically, this research highlights that the physical context of the work environment, in terms of layout, artefacts, and access to technology, shapes the sense of communication experienced.

5.4.1 Physical Context and Position Representation

This finding suggests that although the working model encourages flexibility, there are some positions in which people prefer a fixed physical location in order to work effectively. The above sections on physical context and position representation have highlighted that although working in the same physical environment, employees have many different requirements in terms of performing their respective tasks. Thus, employers, in conjunction with architects, have a variety of position-related requirements to consider when designing a workspace.

5.4.2 Social Context and Position Representation

This research found that there is an interaction between social orientation and position representation. The findings suggest that individuals with an extroverted social orientation,

coupled with a requirement to interact as part of their role, are more likely to meet new people in the organisation. It was identified that the opportunity to meet people often arose due to frequent meetings associated with their position and line of work.

However, those who identified as introverted, and with a focused position representation, suggested that they did not tend to interact with colleagues who were not part of their team, and had fewer opportunities to interact through their work. These findings suggest that communication in the work environment may develop organically between those with similar roles and levels of sociability.

5.4.3 Socially indexed self-representation and Presence at work

Overall, this interaction suggests that offices designed as open-plan and ABW may enhance and promote communication. Firstly, the findings indicate that if individuals can create meaningful connections. They are better able to understand others' body language, preferences and values. This encourages awareness of one another and gives individuals the ability to adjust their behaviour to accommodate others. Conversely, if individuals are unable to develop an accurate representation of others, they are unsure how to behave in their company. Additionally, this highlights that people can use their body language as a form of communication and that others are conscious of this.

Lastly, these findings highlight that an ABW model reduces the notion of work in one fixed space and encourages flexibility within the workspace. This flexibility can also influence the capacity for individuals to work outside of the workspace, such as from home. However, this research suggests that communication, particularly in the form of face-to-face, can be reduced by individuals removing themselves from the workspace.

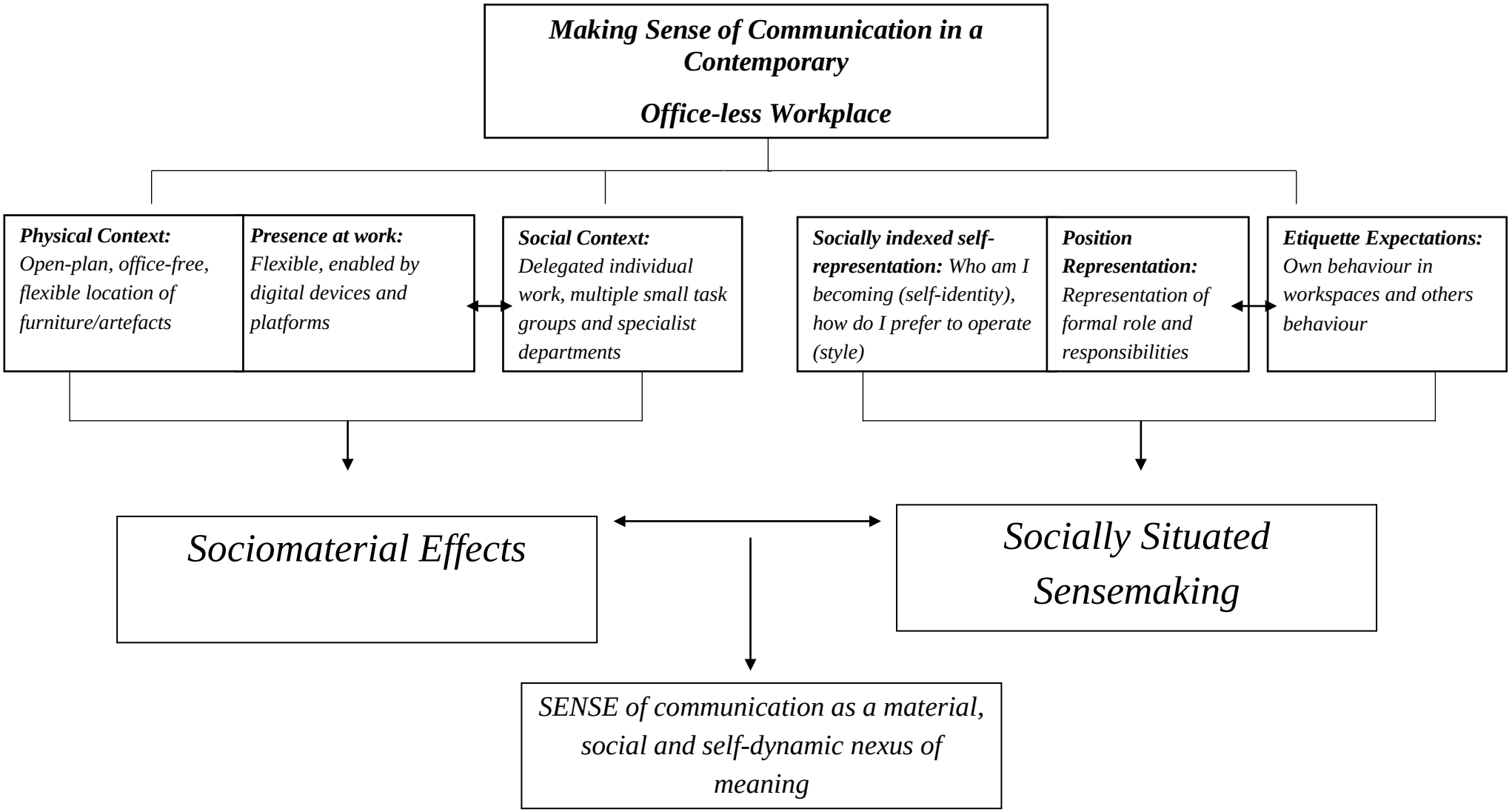
5.4.4 Position Representation and Etiquette Expectations

The interaction between position representation and etiquette representations builds on the relationship between the physical context and position representation. Individuals who viewed interaction as a predominant activity of their position perceived the workspace as a place for connection, networking and collaboration. However, those who viewed their position as requiring limited interaction and mostly focused work, perceived the workspace as a place for working quietly, with minimal distractions. These findings highlight how an individual's position representation influences their interpretation of etiquettes and their behavioural expectations of others.

5.5 The Emergent Model

The findings in Chapter 4 and this chapter, when combined, give us a model representing how participants made sense of the communication they experienced in their new office-free workspace.

Figure 6: Conceptual Model of Making Sense of Communication in a Contemporary Office-less Workplace



5.6 Significance of this Model

There has been substantial research on the topics of communication and the workplace environment, however office-free contemporary workspaces have been overlooked, especially in relation to how communication is experienced in these spaces. Considering the significant movement towards contemporary workspaces (Englen, 2019; Waber, Magnolfi & Lindsay, 2014) and the perspective of CCO, there is an evident demand to understand how individuals make sense of their communication experiences in the work environment. This thesis accomplished the goal of addressing this gap by researching and providing a range of insights to advance the current understanding of how individuals make sense of their communication in relation to an office-free work environment. This is displayed in Figure 6.

Previous research on the work environment has been preoccupied with reviewing how satisfaction, or the privacy of individuals, is changed or influenced (e.g., Baldry & Barnes; 2012; Brennan, Chugh & Kline, 2002; Kim & de Dear, 2013; McElroy & Morrow, 2010; Parkin et al., 2011, Sundstrom et al., 1982). However, this research accepts a holistic CCO approach which suggests that communication is fundamental and constitutive to all work practices, therefore all elements of work practices, satisfaction, and privacy can be considered as constituted through communication.

The concepts of sociomaterial effects, based on Orlikowski's (2007) concept of sociomateriality and socially situated cognition, and Lave and Wenger's (1991) concept of situated learning, were judged to be the best fit for the primary themes that emerged from the analysis. These two concepts account for an interdependent array of social, material, and personal (self) themes, which were at the heart of the findings. This complexity is captured in the conceptual model (Figure 6), which demonstrates how communication is experienced as being influenced by sociomaterial changes to the work environment in relation to the socially situated sense of self. Previous research has not considered each of these concepts together. Instead, sociomateriality and personal (self) considerations have been researched independently. This Master's research project has addressed this gap in the literature, creating a conceptual model (Figure 6) which portrays the relationship between the social and physical environment (sociomaterial effects) with the elements of self (socially situated sensemaking).

5.7 Chapter Summary

This chapter discussed the key findings on how employees make sense of their communication experience in a contemporary office-free work environment, in relation to relevant literature. The six key primary themes influenced the two secondary coding themes of sociomaterial effects and socially situated cognition. The section on research implications discussed how this research addressed the literature gaps identified by the literature review. Finally, this chapter presented the conceptual model which is the primary contribution of this research. The final chapter of this thesis considers the contribution of this research to theory and practice. The limitations and opportunities for future research are then considered, before the thesis is drawn to a close.

Chapter 6: Conclusion

6.1 Introduction

This thesis has presented the findings of a qualitative case study, which sought to understand how workers experienced communication in an office-free work environment after moving from a tradition office building. Specifically, it focused on how the physical work environment influences the communication that is part of employees' primary work practices, and how this is experienced. The research explored how the workspace layout shape:

- Workplace practices (specifically communication) and work experiences?
- The way workers interact with others?
- The way they organise their work?
- What adaptations have been necessary for workers as they moved from working in a traditional office arrangement to this new contemporary arrangement of workspaces?
- What do organisational managers, leaders, change consultants, and building designers or architects, need to consider when making changes to the physical work environment?

A qualitative case study was chosen as the most suitable form of data collection to explore the answers to these questions.

This aim of this chapter is to draw conclusions on how the research answers these questions. The chapter first presents how this research contributes to theory and practice, then concludes by considering the limitations of the research, and opportunities for further research.

6.2 Contributions

This study makes several general contributions to both theory and practice. Firstly, from a theoretical perspective, it highlights how workers experience workplace communication as an interaction between material, social, and personal (self) elements that is consistent with the CCO perspective. Secondly, in doing this it highlights the centrality of communication to organising work, in this case in a contemporary office-free work environment. Thirdly, it provides a conceptual model identifying themes that can be used to guide future studies

which seek to explore the sensemaking of communicative practices in relation to work environments.

Lastly, the findings of this research have practical implications, since they offer managers, architects, and change consultants an exemplary case study to understand the relationship between workspaces and communicative work practices that incorporate consideration of the self.

6.2.1 Specific Theoretical Contributions

This research is located within organisational studies literature and provides a unique case study conducted in an award-winning contemporary workspace in the southern hemisphere. This research contributes to three concepts in the extant literature; CCO (Ashcraft, Kuhn & Cooren, 2009; Blaschke, Schoeneborn & Seidl, 2012; Cooren, 2004; Cooren, Taylor & Van Emery, 2006; Mcphee & Zaug, 2000; Taylor et al., 1996; Taylor &Van Every, 2000), sociomateriality (Orlikowski, 2007), and the situated cognition theory (Lave & Wenger, 1991). This research revealed that participants experience workplace communication as an interaction between sociomaterial effects and socially situated sensemaking. The contributions to these three literature topics are discussed in detail below. Overall, this research contributes to the growing academic literature, across many academic disciplines, that explores how the spatial setting influences and changes work practices by contributing a conceptualisation of workers' sense of communication as a material, social, self-dynamic nexus of meaning, as displayed in the conceptual model (Figure 6).

6.2.2 Contributions to Communication Constitutes the Organisation (CCO) Perspective

A CCO perspective is defined by Cooren et al. (2011) as a viewpoint which supports that "organisations are portrayed as ongoing and precarious accomplishments realised, experienced and identified primarily- if not exclusively- in communication processes" (p. 2). As noted in the introduction to this section, the findings of this thesis are consistent with a CCO perspective (Ashcraft, Kuhn & Cooren, 2009; Blaschke, Schoeneborn & Seidl, 2012; Mcphee & Zaug, 2000). In some respects, each of the participants aligned with and embraced a CCO perspective as they discussed the importance of communication with their colleagues and teams, and how communication ensured that they performed their roles, completed their work, and socialised at work. The participants also spoke about how the materiality of the workspace design influenced the way they were able to communication with others.

They seemed to recognise to some degree that without communication, the organisation could essentially fail to exist (Cooren, 2017). These findings suggest that creating space and time to communicate with others can enhance employee engagement, tenure and connection to the organisation, improve work outputs, and fundamentally constitute the organisation.

In doing so, the findings of this research align with the Montreal School's perspective on CCO (Cooren, 2007), by highlighting the interconnected nature of communication of human and non-human entities (Cooren, 2006) and how together, these allow organising to occur. However, the emergent model extends this perspective by representing the participants' consideration of how assemblages of materiality and space (Bencherki, 2016) are reflected in their accounts of work communication. Participants experienced materiality such as technology, kitchens, kanban boards, and other artefacts, as constitutive of the way they organised work related communication that allowed them to get their work done (Cnossen & Bencherki, 2018).The findings suggest a mutually constitutive dialectical relationship between communication and workspace. These two elements are experienced as reflexively accounting for each other (Cnossen & Bencherki, 2018). For example, the kitchenettes are a collection of benches, cups, cutlery and cupboards. The communicative practices that occur here provide meaning to the artefacts in this space, which in turn shape expectations about what communication is appropriate. Similarly, a work team gathered to collaborate on a project has its communication enhanced through artefacts such as a kanban board, and semi-circular couches with high backs to prevent the transmission of noise, but at the same time, these artefacts structure the communication that occurs. Workers recognise these enhancements and constraints when choosing to use these artefacts for work communication.

Additionally, this research accommodates the critique from Bisel (2010) which encourages an addendum to explain the situations under which the organisation is constituted through communication. He contends that some communication can undermine organising. The emergent model is grounded in participants' sensemaking accounts of all types of communication experiences, regardless of whether they support organising or not.

Overall, this research aligns well with a CCO perspective, as it presents the communication of participants in their contemporary workspace as being constituted through their behaviours, routines, interactions, and comments. Workers' experiences of communication, and the sense they make of these, reveals how central communication is, both to how the organisation is generated, and how it functions (Schoeneborn, Blaschke & Cooren, 2014).

6.2.3 Contributions to the literature on Sociomateriality

Sociomateriality (Orlikowski, 2007) has emerged as a major theme in organisational studies (Jarzabkowski & Pinch, 2013), particularly in relation to the interface between workers and new technology (Leonardi, Nardi &Kallinikos, 2012; Orlikowski & Scott, 2008). Most recently, researchers have turned their attention to the intersection between humans, spatial arrangements, physical objects and technology, and how these are intertwined through language and interaction (e.g., Arnaud, Mills, Legrand & Maton, 2016; De Vaujany et al., 2015).

The findings of this Master's research contribute further support to the contention that spatial configurations and material objects, such as desks, chairs, phones, meeting rooms, couches, kitchens, and computers, are artefacts that enable the accomplishment of work practices (Bencherki, 2018; Nicolini, Gherardi & Yanow, 2003). Additionally, in line with Hernes, Bakken & Olsen (2006), who propose that there is a recursive relationship between space and practice, this exclusive case study demonstrates how space shapes communication practices, and these practices in turn lead workers to alter the space (e.g., the addition of territorial markers like bags). It provides evidence of how the behaviour of participants within work areas shapes the space, (e.g., adding the stand-up tables) and the practices that occur around them. At the same time, it shows how these practices are constantly changing, with participants saying they use stand-up tables for planning meetings in the morning, but for socialising and informal gatherings before the weekend. This finding reinforces the contention that space, materiality, and practices are mutually enacting (Dale, 2005), constantly in a state of becoming (Tsoukas & Chia, 2002), and assign meaning to one another.

This research extends the notion of sociomateriality as outlined by Orlikowski (2007), by proposing an empirically-based model suggesting that workers experience the social and material elements of work as intrinsically implicated in both the communication experiences in the workplace and their sense of self. This research also makes a valuable contribution to the sociomateriality literature, by proposing the notion of sociomaterial effects to capture the agency that sociomateriality has within a contemporary, award winning and unique ABW environment. Moreover, this study extends Orlikowski's (2007) definition of sociomateriality

by advocating for the decentering of the human element in the social and physical world exchange, by accepting the human, social and physical elements as equally implicated in how workers make sense of workplace communication. The study aligns with Cooren, Taylor, and Van Every (2013), who consider the actions of humans in relation to material and social agency, but also incorporates the concept of socially situated sensemaking, highlighting the importance of human cognition within the mutually constitutive relationship between the social and physical worlds.

This research concludes that in the contemporary workspace studied, the participants' sense of communication is contingent on the interplay between contextual factors (physical, social and presence at work) and individual representational themes (self, position and etiquette). This relationship is labelled as a material, social and self-dynamic nexus of meaning, to emphasise that all elements are experienced as working in concert with each other.

6.2.4 Contributions to Situated Cognition Theory

Situated Cognition Theory has predominantly been applied in the field of anthropology to investigate the process of learning, and in social psychology to explain the inseparable linkages between knowledge and social, cultural, and physical contexts. Sensemaking is an ongoing form of cognition that seeks to achieve plausibility rather than certain truth (Weick, 1995). This Master's research provides support for the idea that communication is experienced as a form of socially situated sensemaking that emerges from the interaction between individual representations and contextual factors such as physical, presence and social (Irving, 2016).

In this study, the findings are consistent with those of Irving (2016), highlighting the entanglement of the individual's representations, social contexts and physical work environment, but also differ, by exploring that this focuses on sensemaking (Morgan, Frost & Pondy, 1983; Weick, 1995) by virtue of being an interpretive study that sought to understand the sense made by participants of communication in the new sociomateriality (Orlikowski, 2007) of their office-less workplace. In addition to situated cognition, these are key considerations in process studies which assert that an organisation is a collection of processes and as such, is always in a state of becoming (Hernes, 2008; Langley & Tsoukas, 2010; Sandberg, Langley & Tsoukas, 2017).

When considering the social and physical elements that make up sociomateriality, in conjunction with how these provide the situation for cognition and sensemaking about workplace cognition, a holistic view is produced of how communication is enacted and made sense of in the workplace. The conceptual model (Figure 6) visually depicts this holistic sense of communication as a material, social, and self-dynamic nexus of meaning.

6.3 Practical Contributions

From a practical perspective, it appears that the flexible and office-free workspace design, together with collaborative working modes and smart communication technology, can provide a positive experience for employees. Additionally, office-free workspaces can be advantageous for organisations in providing flexible and contemporary spaces, often requiring bespoke, innovative furniture, which can be used to attract and retain capable employees. The findings from this research suggest that when organisational management discusses strategic direction and creating business value, topics such as space and workspace design should be seriously considered, in conjunction with work modes and technology.

These findings, and the model that depicts these, propose that the physical work environment has a significant impact on communicative work practices, and vice versa. Therefore, it is recommended that managers conduct comprehensive research into employees' and teams' work styles and preferences, and how these would correlate with the etiquettes associated with an ABW model. This research could then inform the education and training provided to employees prior to transitioning to a workplace with an ABW design. Such education would include information about what to expect when working in an activity-based, office-free environment and how to accommodate the needs of colleagues in a shared work environment.

Education could take the form of formal workshops for all employees, exploring etiquettes for behaviour in particular spaces and ways to take advantage of available software and technologies, together with flexible working options (i.e., working from home) when necessary. Additional training could include awareness of personal communication preferences, position-related interactional requirements, and the appropriate spaces for accommodating these. Ideally, this would support the standardisation of behavioural expectations across the organisation and foster effective communication and a level of comfort in raising concerns with one another.

The findings of this research suggest that a 'buddy-system' is vital to new recruits, in terms of navigating their initial working weeks in a fluid and mature work environment such as the one studied. Furthermore, participants suggested that a buddy system was a useful method to introduce new employees to the ABW model. A formal 'buddy' system would assist new employees to transition into an office-free workplace and would be particularly beneficial if they have not encountered a similar workspace before. This initiative could have new employees paired with someone in their immediate team for the initial period of employment.

Lastly, much money is spent on designing contemporary open-plan workspaces. Budget decisions should not be finalised without comprehensively exploring and understanding the relationship between work dynamics and workplace spaces. This study highlights the importance of conducting a thorough analysis both in the design stage and once a facility is in use, to ensure effective employee engagement and interaction.

6.4 Research Limitations

All research must navigate challenges and accept limitations, some of which are evident at the beginning of the journey, and others that develop or become apparent as the study progresses. This section will outline the challenges and limitations that the researcher encountered while completing this in-depth case study of how workers experience communication in an office-free contemporary workplace.

An interpretive research approach was selected for this case study because the intention was to understanding the participants' experience from their point of view, rather than take a critical perspective and critique the strengths of any effects, or take a positivist perspective and test hypotheses. This, and the fact that the study involves a single building, means the model produced is insightful but cannot be generalised to other open-plan or ABW workplaces. The study's value lies in the depth of the insights gained. Secondly, on the surface a sample of 14 participants seems small. However, this was a theoretical rather than representative sample, which is often the case in interpretive studies. Therefore, a sample size of 14 could only be construed as a limitation if the study had sought to develop a representative sample, which was not the case. The sample of 14 was sufficient to produce a functional transect across the types of interaction evident in the workplace.

Guest et al. (2006) indicate that a sample size of fourteen is often satisfactory to achieve saturation in a qualitative study. While this was certainly the case with this study as by the

fourteenth interview no new themes were being suggested by the analysis. However, there is a possibility that more interviews would have allowed greater elaboration of the themes that were identified. Unfortunately, time constraints and the cost of further organisational visits precluded conducting further observations. All follow-up data collection had to be done via digital means (e.g., email exchanges) or by phone.

It should be noted that employees had moved from an older workspace into the new building, and therefore encountered an overall improvement in the quality of their workplace facilities (e.g., a modern coffee shop and workstations). This general enhancement of the work environment complicated the data analysis. It is possible that some of the effects participants reported were a result of the workplace upgrade, rather than specifically relating to the office-free design. In addition, a challenge associated with the main data collecting method of semi-structured interviews is identifying a suitable range of employees within the organisation to interview. The researcher endeavoured to mitigate this by reviewing the organisational chart, which helped identify a range of participants from each department while also including the range of communication that was observed in the workspaces. Following this, the researcher's organisational contact and advisor helped to identify new recruits, long-standing staff, and a variety of career stages from across each department.

6.5 Future Research

The six key themes that emerged from the analysis of workers' accounts of their office-free experience provide a valuable framework for guiding future research. In particular, the theme of 'participant's position representation' presents a new lens for examining workers' accounts of workplace communication. This original theme was created to refer to an individual's experience of their position in relation to a work task, and how these representations influence workers' interactions within the physical work environment. A future study could explore how factors such as position-specific key performance indicators (KPIs) and associated interaction requirements are influenced by the physical work environment. The research could also review how occupational priorities influence work practices within an office-free work environment. The findings of this study support the hypothesis that no single working environment is suited to workers in differing roles, as each occupational role is associated with a variety of requirements, interactions and preferences. Exploring how occupations are impacted by office-less workspaces would be a specific and logical direction

for future research, providing additional insight into how different sectors can maximise the design of their work environments.

Further research could also focus on identifying the range of interpretive discourses that underpin the language themes which emerged through analysis of interview transcripts such as those produced in this study. Identifying interpretive discourses was not possible in this study as the small sample did not allow clear discursive patterns to be detected. However, future research of this nature would be expected to provide further findings on the relationships between meaning, sensemaking, and the geosocial dimension of work environments. Specifically, such research could extend the contribution of this Master's study to the literature addressing the interconnection between organisational communication and workplace design.

Given that this study focused on one organisation in New Zealand, it extends an invitation to conduct further case studies to compare and contrast how workers experience communication in other organisations with similar workplace designs, both in New Zealand and internationally, to gain a broader picture of how the participant's context (i.e., their work, culture and industry) are manifested in interpretive accounts.

COVID-19 has interrupted the world economy, slowed supply chains and production, restricted transport, and distorted consumption patterns (McKibbin & Fernando, 2020). The virus has had a profound impact on the way work may be conducted, revolutionising remote working capabilities in many organisations. Perhaps in some cases remote working had not been considered as a possibility, prior to social distancing becoming mandatory. As a result, office-free workplaces may become undesirable because of the need to practice social distancing to avoid cross-infection, especially if social distancing is required for the foreseeable future. These repercussions have an impact on the current study, as sharing workspaces is an essential element of an ABW design and shared workspaces may become be unacceptable. Kenny (2020) reports on how the future of work could change as a result of COVID-19, with a particular focus on the open-plan work environment. In the article, Lizzi Whaley, the chief executive of Auckland design and fit-out, states, "Everyone has issues with open-plan working and we've been trying to solve them for years". Such observations suggest that remote working is likely to gain traction and will become the new normal for many. Therefore, potential further research could explore how the physical landscape of work

must change to ensure worker safety in the face of a continued risk of COVID 19 transmission.

6.6 Conclusion

This Master's study used a unique, award winning contemporary workplace as the focus of a qualitative case that thoroughly explored how staff more familiar with traditional office buildings experience working in a new contemporary workplace without offices. This study is unique as research on office-free work environments in the southern hemisphere is scarce. Not only does it provide valuable insights into how workers make sense of their experiences, it presents an empirically-based conceptual framework that captures the central themes in employees' accounts of their experiences. In doing so, it contributes an original conceptual model, which could be of value to all those associated with designing and managing office-free workplaces.

The analysis of participants' accounts of their experiences revealed six key primary themes. Some themes were supported by previous research on the effects of the physical working environment, while other themes are original and highlight how communication is shaped by the office-free design in the workplace studied. These themes contribute new insights into how the geosocial environment (Mills, 2002), in this case, an ABW environment, is experienced by workers used to buildings with offices. Specifically, the study demonstrated that an individual employee's communication, presence at, and absence from work need to be understood as being embedded in a range of considerations relating to social orientation, occupational role, and the availability of task-appropriate workspaces.

The primary contribution of this research is the empirically-based conceptual model that shows how workers' experience of communication in their contemporary office-free workplace occurred within a meaning nexus constituted of mutually influencing social, material and personal (self) dimensions (See Figure 6 in Chapter 5). This model proposes that the participants were strongly influenced by the materiality of their workplace. However, the materiality influences are intertwined with social and personal (self) factors. The findings suggest that the most significant factors influencing communication are technology capability, social orientation, and position representation and associated tasks. The model also captures how the arrangement of physical objects and spaces gives meaning to and influences communicative practices in the workplace in a mutually constitutive way.

Therefore, people such as culture managers, consultants and architects should consider these dimensions together, when designing workplaces or managing staff who interact in them.

Overall, this research answered the research questions by providing a model that conceptualises how workers who have transitioned to an office-free way of working experience make sense of communication in their new office-free contemporary workspace. The model, which was derived inductively from two levels of analysis, provides a finely nuanced view of how the geosocial environment in an office-free workplace is coupled to workers' experience of communication practices. By showing that ultimately, workers communication experiences center on socially situated sensemaking and sociomaterial effects, it contributes an original conceptual model to the sociomateriality literature that incorporates the individual's sensemaking. This is significant as sensemaking is not usually a consideration in studies of sociomateriality. Confirmatory research will be needed to confirm the wider applicability of this model. However, if this is confirmed, then the model will not only make a theoretical contribution but will be a useful practical framework for managers seeking to maximise employee engagement in office-free workplaces, and for those designing and managing the transition to such workspaces.

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8. Appendices

8.1 Appendix 1: Information Sheet for Interview Participants

Department of Management Marketing and Entrepreneurship
Email: ssh132@uclive.ac.nz

20 September 2019

HEC Ref: HEC 2019/43/LR Amendment 1

Adapting to work in innovative contemporary workspaces: A comparative study of existing employees and new recruits

Information Sheet for participants

Tēnā koe, my name is Sophia Shamy and I am studying towards a Master of Commerce in Management. As part of the thesis component of this degree, you are invited to participate in the research project: **"Adapting to work in innovative contemporary workspaces: A comparative study of existing employees and new recruits"** which is the research project that will be the basis of the thesis of my Master of Commerce degree.

The aim of this project is to understand how moving to the new workspaces in the building has impacted upon workplace dynamics. The specific interest is on the benefits of the new workspaces for communication between colleagues.

The research will be carried out using an appreciative inquiry approach that seeks to explore the way work practices have been translated into the new spaces, and the affordances and opportunities the new workplace layouts provide. The findings will produce valuable insights for employees, their managers, change managers, and contemporary building designers such as architects.

Participation in this research project is voluntary. If you agree to participate, your involvement will entail an interview and follow up emails or phone calls (if required), walking the researcher around your workspaces and describing how you use them, and allowing the researcher to observe you in practice when working in the new building.

Each interview is estimated to take between 20-60 minutes and will be followed up by telephone or email if further information is required. The questions that will guide the interview are:

- How does the workspace layout shape workplace practices (specifically communication) and your work experiences? The way you interact with others? The way you organise your work? Your work practices?
- What adaptations have been necessary for employees transferring from working in a traditional office arrangement to this new contemporary arrangement of workspaces?
- What have been the benefits associated with the innovative workspace, in relation to the customer interface?
- What is needed to maximise the benefits of these workspaces?
- What changes do others need to make to optimize your key work practices?

- What activities, spaces and people are included in your daily professional practice?

The interviews will be transcribed, and you will have the opportunity to view your transcribed interview and make changes if you consider these are necessary.

Because participation is voluntary, you have the right to withdraw from the project at any stage without penalty. You may ask for your raw data to be returned to you or destroyed at any point. If you withdraw, all information you provide or that relates to your personal work practices will be destroyed. However, once analysis of raw data starts on 1 December 2019, it will become increasingly difficult to remove the influence of your data on the overall results.

To ensure confidentiality of the responses gathered during the study, the following actions will be taken:

1. Data will be transcribed, and participants will be identified only by code so names are concealed
2. All data will be securely stored and only accessed by the research team
3. All data will be stored securely by password for a period of five years and securely destroyed afterwards
4. Interviews will be conducted in a secure and private location
5. No third parties are involved. Participants will only be discussing their professional experiences and practices
6. Any publications as a result of this research, including the Master's thesis, will be written in such a way as to ensure the all participants' identities are concealed.
7. The thesis is a public document and will be available through the UC Library.

Please indicate to the researcher on the consent form if you would like to receive a copy of the summary of results of the project.

If you feel upset by anything that is spoken about during the interview process, you may ask for the topic to be changed or the interview to be terminated.

The project is being carried out by:

Researcher's Name: Sophia Shamy

Master of Commerce (Management) Student

Department and University: Management marketing and Entrepreneurship, University of Canterbury, New Zealand.

Email: ssh132@uclive.ac.nz

Primary Supervisor's Name: Professor Colleen Mills

Department and University: Management marketing and Entrepreneurship, University of Canterbury, New Zealand.

Email: colleen.mills@canterbury.ac.nz

The researcher and her primary supervisor are pleased to discuss any concerns you may have about participation in the project.

This project has been reviewed and approved by the University of Canterbury Human Ethics Committee, and participants should address any complaints to The Chair, Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch (human-ethics@canterbury.ac.nz).

If you agree to participate in the study, you are required to complete the consent form below and return to Sophia Shamy.

8.2 Appendix 2: Consent Form for Interview Participants

Department of Management
Marketing and Entrepreneurship
Email: ssh132@uclive.ac.nz

Adapting to work in innovative contemporary workspaces: A comparative study of existing employees and new recruits

Consent Form for participants

☐ I have read and understood the description of the above-named project and been given the opportunity to ask questions. On this basis I agree to participate as a subject in the project, and I consent to publication of the results of the project with the understanding that my identity will not be revealed.

☐ I understand also that I may at any time withdraw from the project, including withdrawal of any information I have provided if this should remain practically achievable.

☐ I consent to the interviews in which I participate being audio-recorded. I understand that these files may be transcribed and that any transcriptions will be securely stored so that only the researcher, her supervisor and her research assistants have access.

☐ I give consent to be observed when working in the workspaces in the Trust Power building.

☐ I understand that I can contact the researcher Sophia Shamy or her supervisor Professor Colleen Mills for further information.

☐ By signing below, I voluntarily agree to participate in this research project.

Name:_____ Signed:_____ Date:_____

I would like a summary of the results of the project. Email address *(for report of findings, if applicable):*_____

The signed consent form can be emailed to Sophia Shamy at ssh132@uclive.ac.nz or handed to Sophia before commencing the interview.

Thank you for your interest in participating in this research.

8.3 Appendix 3: Final Interview Question Guide

Introduction

1) Tell me about your role. What does your job entail? Who do you need to interact with to do your job?
2) How do you find working in or from this building?
3) Tell me what you like most about working in this building.
4) Where do you physically locate yourself when at work (most of the time)? Why?

5) How does the building shape the way you work? (e.g., where you walk, talk, go to think?)

6) How have you tried to shape the spaces you work in? (e.g., moved furniture or other objects around) If yes, please explain.

7) Tell me about how much work time you spend in the building each day/week. How does the building contribute to your choices about being present/absent?

8) How does this compare to when you worked in the old premises? (Or your previous place of employment?) Why do you think this is?

Had own area in premises/ down a long narrow hallway/one way in and out/ board room, CEO office, sat right near them.

9) Tell me about your experience of moving from the old premises to the new one. Interesting aspects? Challenges? Opportunities? What have you learnt about your preferred ways of working?

Focusing on communication

10) Tell me about how the workspace layout shapes your workplace communication. What spaces do prefer to interact in? What spaces do you avoid interacting in? Why?

11) How does your daily communication compare to when you worked in the previous premises? (Or your previous employment location)?

12) How do the current workspaces hinder or enhance or facilitate communication?

13) What have been the benefits associated with this innovative work environment in relation to how you interact with key colleagues (i.e., Line manager, team members, key visitors)?

14) Have you communicated with new people since moving to this building? Who?

Focusing on practices

15) How do the spaces in the new building shape your daily/weekly work practices? The way you organise your work/time/day? Your routines? When you arrive and go home?

16) How have your behaviours changed compared to when you first arrived in the building? Have you changed your way of interacting? Have you changed the amount of time spent here?

17) How do you manage your presence in the building?

18) Tell me about how the building shapes your downtime. Where and how you have breaks? Why?

19) What are the things this building has allowed you to do that you could not do before?

Focusing on the influence of spaces (as opposed to the objects that creates them)

20) What spaces do you prefer? And why?

21) Do you move around more or less in this building compared to the old building? (Or previous employer's premises?) Why do you think this is?

22) What do you miss about the spatial arrangement in your old building? (Or previous employer's premises) (e.g., more space to put personal possessions, privacy, noise level, cosiness of an office)

23) FOR NEWCOMERS: When you were offered a job how did the premises influence your decision to accept?

24) What do you observe about how the spaces (as opposed to the furniture and fittings) shape the interactional dynamics in the building?

Focus on material stuff

25) How does the design and arrangement of furniture and fittings influence the way you communicate?

26) How do devices (laptop, cell phone, printers) contribute to how you operate at work? (e.g., do you email colleagues in the same building as much as before?)

Conclusion

27) To what extent has your daily professional practice changed since moving into the new building?

28) What changes do others need to make to optimise your ability to carry out your primary work practices in this building?

29) What advice would you give others who are moving to a contemporary open-plan office-less workspace?

30) In your opinion, what design features need to change to maximise the benefits of this building's workspaces?

31) If you were to use a couple of words to describe your attitude to your workplace, what would they be?

32) If you were to use a couple of words to describe the way you interact in this building what would they be?

33) What questions do you have for me?

8.4 Appendix 4: Human Ethics Committee Approval Letter

HUMAN ETHICS COMMITTEE
Secretary, Rebecca Robinson
Telephone: +64 03 369 4588, Extn 94588
Email: human-ethics@canterbury.ac.nz

Ref: HEC 2019/43/LR Amendment 1

2 September 2019

Sophia Shamy
Management, Marketing and Entrepreneurship
UNIVERSITY OF CANTERBURY

Dear Sophia

Thank you for your request for an amendment to your research proposal "Translating Work Practices Into Contemporary Workspaces: the Academic's Perspective" as outlined in your email dated 27th August 2019.

I am pleased to advise that this request has been considered and approved by the Human Ethics Committee; **subject to the following:**

- *Please forward a copy of the correspondence from the organisation agreeing to take part in the research once this has been received.*

Yours sincerely

Dr Dean Sutherland
Chair, Human Ethics Committee